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ORIGINAL ARTICLES.

A STATISTICAL HISTORY OF YELLOW FEVER IN PHILADELPHIA, WITH A REPORT OF TWO CASES RECENTLY TREATED AT THE EPISCOPAL HOSPITAL.¹

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WITH the exception of Asiatic cholera, perhaps, no epidemic disease of modern times elicits more widespread interest, or is attended with a greater fatality, than yellow fever.

To illustrate the frightful ravages this disease may occasion, I need only call to your mind the epidemic that visited London in 1660, in which 97,000 out of a population of half a million perished; that of St. Domingo in 1802, when 20,000 out of a population of 40,000 fell victims; or that of Constantinople in 1812, when the mortality was nearly 160,000.

Our city of Philadelphia had passed through only seventeen years of its existence when, in 1699, yellow fever, then an obscure disease, first terrorized its inhabitants. The records of this first epidemic are very meagre, being confined to a few letters written by unprofessional men. At that time there were less than 4000 inhabitants, and the mortality was 200.

For the next forty-two years there was complete exemption, and the memory of the first visitation had almost faded out, when a second occurred in 1741, and 240 died. On neither of these occasions was there a satisfactory cause for the disease obtainable.

There were some cases of the fever in 1747, but we know nothing of the number. This time the inception of the disease dates from and is attributed to the arrival of a vessel from the West Indies.

In 1760 there were a few cases.

In 1762 the disease originated in the sailors' quarters, and was apparently traced to a sick sailor recently arrived from Havana. We have no statistics of this attack, but it is supposed that several hundreds died. Then there was a lapse of thirty-one years without a case. In 1793, in the midst of seeming security, the city was visited by the most appalling epidemic ever known in its history. The

population then numbered 50,000, and at least 4000 died.

When the people were fully convinced of the destructive nature of the disease, a panic occurred, and in a few weeks as many as 12,000 had sought refuge in the country.

Estimating the population then at 38,000, which is perfectly fair, the death-rate would be one to nine and one-half inhabitants, or about fifty-two deaths *per diem* during the yellow fever season, a period of about eleven weeks. At this time the fear of contagion was so great that people locked themselves up in their houses, both sexes smoked tobacco religiously, burned it in the houses and streets, used vinegar or camphor for inhalation, carried tarred rope around in their pockets, chewed garlic, walked in the middle of the street, tried to get to the windward side of any chance passer-by, and adopted other precautions quite as ridiculous. A West Indies vessel was assigned as the cause for this invasion.

In 1794, 1795 and 1796, there were a few cases.

1797 ushered in another epidemic, which occurred coincidently with the arrival of a vessel from the West Indies. About one-half the population sought safe quarters. Of those remaining about 1300 died.

In 1798, upon the arrival of the fever, two-thirds of the whole population, at least 40,000, fled, and of the remaining 20,000, 4868 were reported to the Board of Health as being affected, of which number 3600 died.

In 1799, again, there was a general exodus, and the city was left almost deserted. About 1000 died.

1800 and 1801 alike had about twenty deaths.

In 1802 the mortality was about 835; in 1803 about 190; in 1805 about 400; in 1806, 1807, 1808, 1809, and 1811 there were a few cases. In 1819 there were twenty-four cases, of which number twenty died.

In 1820, of 125 attacked, there were eighty-three deaths.

There were two cases in 1826, and after that, with the exception of one case, which slipped through quarantine in September, 1841, and was treated at the Pennsylvania Hospital, twenty-seven years passed without any yellow fever.

In 1853, upon the arrival of the Mandarin, a Cuban vessel, the disease broke out again. 170 cases were reported, and 128 died. Most of these cases were treated in the city hospitals, and without

¹ Service of Casper Morris, M.D., and Frederick A. Packard, M.D.

any communication of the disease. With the exception of Dr. La Roche's report of the fever in 1870, the records of cases from 1853 are almost entirely confined to a few hospital reports. A number of cases were treated at the Philadelphia Hospital, but the old records are not obtainable. The Pennsylvania Hospital admitted twenty-four cases in 1854, mortality fifteen; six in 1855, mortality six; four in 1856, mortality three; one in 1857, mortality one; one in 1858, mortality one; four in 1859, mortality three; one in 1868, mortality one; and one in 1870, mortality one. In 1858 a case was admitted to the Episcopal Hospital.

In 1860 a sporadic case occurred in the practice of Dr. Bourdonville. The subject, a German, resided on Front Street and was employed in a board-yard at the foot of Green Street. Some time before he was stricken he was engaged in rafting lumber on the river, but in no way came in contact with any yellow fever. He became sick on September 1st.

On the last of September, the "Waterwitch," a vessel from Cienfuegos, Cuba, arrived at the Lazaretto, and landed five cases, of which one died.

On June 29, 1870, the brig "Thome" arrived at the Lazaretto, loaded with logwood, and in a filthy condition. The captain died of yellow fever on the way. Shortly after her arrival the fever broke out among the stevedores engaged in discharging the cargo, the bargemen, and the officers and employés of the Lazaretto. Altogether, twenty-nine were attacked, and eighteen died. On looking over the Municipal Hospital records, three cases were found to have been admitted there in 1870, one on August 10th and two on September 8th.

On August 25, 1878, an entire family named Bonelli, consisting of eight members, was taken to the Municipal Hospital from 804 South Eighth Street. They were refugees from Vicksburg, where the disease was then rife, and were all taken to the hospital on suspicion. Two of them had yellow fever of a mild type, and recovered in eighteen days. The rest were detained two weeks, and were discharged as having no disease. On September 21st of the same year a case was sent from 464 North Fourth Street. On August 21, 1879, a case was received from 509 South Front Street, which died at the end of six days.

The following note of the case is taken from the records: "Quite yellow; profuse black vomit; great irritability of stomach."

On the 6th of October, in the same year, a case was sent there from the Jefferson Hospital, and died in five hours. This memorandum was found: "Unconscious while here, unable to swallow, quite yellow, and after death became more so."

This is a summary, as near as can be obtained, of

the cases of yellow fever that have occurred in Philadelphia since the first epidemic in 1699. There have been detained at the Lazaretto during eleven years, from 1873-1883, inclusive, twenty-five cases, and since the latter date not a case has been reported.

The following are histories of two cases of yellow fever, admitted to and treated at the Episcopal Hospital in Philadelphia, during the month of August, 1890.

On the morning of the 20th of August, 1890, the British steamship "Blakemore," from the port of San Diego, Cuba, arrived at Philadelphia with a clean bill of health, having on board, among others, two men, one the engineer, the other a deck-hand, both of whom afterward developed yellow fever. On questioning the patients about the existence of the fever at the ports they had visited, they replied that they had neither seen nor heard of any cases. Just before the vessel left San Diego there was a case of sickness on board, which was treated and cured by a physician of that place, but it in no respect resembled their disease.

CASE I.—Peter M., aged twenty-three years, was admitted on the afternoon of August 22. On Tuesday, August 19, after previous symptoms of anorexia, malaise and constipation, he had a marked chill, followed by fever and sweating, which recurred on the 20th, 21st and 22d. On admission his tongue was slightly coated, appetite wanting, bowels constipated. He had severe frontal headache, great tenderness in the epigastric, hypochondriac and lumbar regions, and general aching. There was vomiting of a brownish fluid. The skin was lemon-colored, the conjunctive were deeply jaundiced, and there was a slight injection of the conjunctival vessels. The patient was perfectly rational, but was very restless, and complained of sleeplessness.

A powder of calomel and bismuth subnitrate was ordered every three hours, and quinine sulphate gr. iv. every six hours. On the 23d he had a return of the chill, fever and sweat, and a continuance of the vomiting, the vomited matter assuming the appearance of coffee-grounds. In the afternoon the temperature was 103°, the pulse only 60, and the respiration 28. The pulse was regular, and of good volume.

The two following days were marked by no unusual symptoms. The vomiting persisted.

On the 25th he had a dark-colored movement.

August 26. At 5 A.M. he vomited a large quantity of fluid, which was described by the nurse as very dark in color, with streaks of light-red blood running through it. Whitish froth floated over the surface of the fluid, and in a few minutes an abundant black and tarry-looking sediment formed. He complains frequently of hoarseness and soreness of the throat. The fauces are considerably inflamed, and the gums very tender. He has been very much annoyed by hiccough, which was relieved

for a time, and re-excited by percussion over the liver. Musk finally controlled it. The pains in the back and knee-joints are very distressing. The pulse-rate is normal, but the heart is becoming very weak. The conjunctivæ are very much injected. The milk which he had been taking came up in tough curds, and rice-water was ordered instead, but, finally, nourishment by the mouth had to be discontinued entirely. In the morning he had two movements similar to the one of the preceding afternoon. Examination of the urine revealed the presence of a small amount of pus and a large quantity of albumin.

27th. Extreme restlessness has been a constant symptom. Vomiting continues, but is accompanied by no retching. Breathing is becoming difficult. The pulse is 80, and very feeble. The face is dusky. Toward the end the patient became stupid, then comatose, and about one-half hour before death he had a convulsion in which his limbs jerked violently. The head was turned to the right side, and there was violent twitching of the orbicularis palpebrarum muscles and general tremulousness. The tongue was firmly held between the teeth, a small quantity of blood escaped from the mouth (probably from the wound inflicted on the tongue), and at the same time he had an involuntary movement of about two drachms of blood. He had three convulsions, one following closely on the other, and the third closing the scene. During the whole course of the disease, with the exception of the few hours preceding his death, the patient was conscious, and unusually cognizant of everything that occurred.

On the second day, under the impression that the case was one of intermittent fever, the blood was examined microscopically for malarial bodies. None could be found; but in the field of the microscope several large bodies could be seen, somewhat larger than the normal white blood-corpuscles, containing finely granular pigmented matter, and possessing amoeboid movement. The shape varied greatly, at one time being perfectly round, again oval, then elongated, dumbbell-shaped, or crescentic.

Post-mortem examination: Well nourished. The skin retained the original deep-yellow tinge, save at the dependent portions, where it had assumed a dark-purple color.

The lungs were dark-red, very much congested, and were crepitant.

The heart was slightly dilated.

The liver weighed three and one-fourth pounds, was fatty degenerated, and was light-yellow.

The gall-bladder was full of dark-green bile.

The spleen was normal in size, somewhat elongated, very dark colored, soft, and very friable.

The kidneys were of natural size, rather pale, and colored yellow. Otherwise they seemed to be normal.

The stomach contained four or five ounces of coffee-grounds fluid, and its walls were covered with mucus. After washing out the organ, the mucous membrane appeared very much degenerated, dirty-white in color, with reddish foci of capillary congestion, and one or two ecchymotic patches.

The intestines were pale, and contained a thick, sticky, slate-colored fluid.

The mesenteric glands were dark in color, and slightly enlarged. A small haemato-ma was noticed in the mesentery. The tissues were uniformly yellow.

CASE II.—David M., aged forty-two years, was admitted on the morning of August 25, 1890. He had complained of anorexia and headache for a few days, and on Saturday evening, August 23d, he had a severe chill, followed by nausea and vomiting. He had only one chill, and since has complained of fever. On admission his temperature was $99\frac{1}{2}$, pulse 68, respirations 22. His tongue was lightly coated in the middle with whitish fur. His skin was lemon-colored, and where it was exposed to the air it was bronzed. There was decided pitting on pressure. His face was somewhat flushed, but deep pressure revealed the yellow color beneath. His conjunctivæ were jaundiced, and the conjunctival vessels injected. Bowels were extremely constipated. He complained of intense pains in the epigastric and hypochondriac regions, dull and aching pains in the lumbar region and in some of the joints, especially the knees. Shortly after admission he began vomiting profusely a coffee-grounds fluid, first on one side of the bed, then on the other. The vomited matter gushed forth without any effort on the part of the patient, and hardly fifteen minutes elapsed between each act of vomiting. After midnight he vomited a quantity of blood, which was described as looking like tar. At 2 A.M. on the 26th the vomit was like blood much diluted with water—claret-colored. The milk which was given him came up in tough masses. Earlier in the evening his respirations, which had been normal in rate and easy, became very labored and 30 to 35 per minute.

On examining the chest the next morning (26th), there was marked dulness over the whole chest and feeble breathing; his pulse became very weak, but the rate was not much increased, being about 80. He was very restless, constantly tossing from side to side, and was unable to sleep. He became comatose, and died so about 1 P.M.

Post-mortem examination: A well-developed, muscular man.

The heart was normal in size, and quite firm.

The lungs were intensely congested throughout their entire extent, barely floating in water.

The spleen was normal in size, very black, and much degenerated.

The liver weighed three and one-half pounds; very light yellow in color.

The stomach: Mucous membrane degenerated. A few small ecchymoses were noticed—color dirty-white; contained about half a pint of coffee-grounds matter.

The intestines contained a thick, semi-liquid, slate-colored material.

Mesenteric glands were blackish.

Kidneys weighed eight ounces each; light yellow in color, capsule non-adherent.

**NOTES ON THE RADICAL OPERATION FOR
THE RELIEF OF HERNIA.¹**

BY H. W. BOONE, M.D.,

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IN this paper I hope to give a brief sketch of my experience among the Chinese in the treatment of hernia by the open method. Hernia appears to be common among the Chinese, but only a small proportion of those suffering from it ever apply to a foreigner for treatment. In examining people in the out-patient department one occasionally finds that they have a hernia, but the majority of these cases decline any treatment for their trouble. As they do not use any kind of truss, and as surgical relief is unknown to the native doctors, the number who die annually from strangulated hernia in this nation of three hundred millions of people must be very large indeed. From time to time we see the report of a case which has been operated upon by some foreign surgeon, but at best only a very few have been so treated. This whole subject of hernia amongst the Chinese, with the best way to obtain their confidence and to get them to apply for relief, and the methods of relief which will be best for them, is well worthy of our careful study and attention. I will relate a case that will serve to illustrate the method which I have commonly used when an operation was necessary, and then proceed to the general consideration of the subject:

W. A. F., male, aged forty-two, married, servant; has been in the chain-gang for some time; is poorly nourished; has led a dissipated life, and has smoked opium. He has a congenital inguinal hernia on the left side, which has given him trouble for the past two years; suffers from colicky pains and dragging sensations in his back and sides. The hernia is reducible. He desires to be operated upon for the relief of pain.

October 3d, assisted by Drs. Jamieson, Reid, Alsopp, and Whitney, under chloroform and with full antiseptic precautions, I cut down upon the sac, which was densely adherent to the surrounding parts. The cord was carefully separated, the sac freed, and, having ascertained that the bowel was returned to the abdominal cavity, the sac was twisted and transfixated at the highest point which could be reached, with a double chromic catgut ligature, the strands of which were interlocked, and then the neck of the sac tightly tied and cut across below the ligatures; the long ends of the ligatures which secured the sac were then made to pass through the pillars of the ring, were drawn tight and tied firmly. The remainder of the sac was left *in situ*, a drainage-tube was inserted, the wound sewed up, and a dressing of iodoform wool, absorbent cotton, and gauze bandages was applied, with an elastic bandage over all. The temperature on the sixth day was 101.9°,

owing to a slight inflammation of the testicle, with a little fluid in the tunica vaginalis. On the eighth day the temperature was normal, and from that time there was no further trouble. On the twentieth day a small portion of the end of the sac was removed with scissors from the track of the drainage-tube, and on the twenty-eighth day the parts were firmly healed. The patient was kept in the hospital until the forty-fifth day, and was discharged cured, with no impulse on coughing and no sign whatever of the hernia.

The hospital record shows six cases operated upon and discharged as cured, and one death after operation. In this latter case I tied the sac with catgut, but omitted purposely to suture the pillars of the ring, relying on some statistics which went to show that this was not necessary for the success of the operation. The patient had a good deal of retching and vomiting after the chloroform, and the catgut slipped, with the result that the bowel was exposed in the neck of the sac. He died from peritonitis. I now use strong silk made perfectly aseptic, as it seems less liable to slip or to untie than the catgut ligature, and I prefer to stitch the pillars of the ring with strong sutures.

The above operation has often been called "the radical cure." This is evidently a misnomer, for the percentage of relapses, even in the hands of the most experienced operators, is large, some writers placing it as high as 31 per cent., though others claim better results. In the words of Mr. Mitchell Banks: "The operation is not, in the proper sense, a radical cure, since the inguinal ring is not closed." Mr. Banks's conclusions as to the nature and value of the operation are well worth quoting:

"1. The wearing of a well-fitting and well-acting truss is by no means so great a burden as is represented.

"2. The operation is very seldom indeed required in children. A well-fitting truss, worn for a sufficiently long period, will cure the vast majority of herniae in children. In a few cases where the omentum is adherent, or where the hernia is very large, or where no proper precautions are observed with reference to the wearing of a truss, an operation may be performed.

"3. In small femoral ruptures with adherent omentum, the operation is especially to be advised. The same rule applies to inguinal ruptures with adherent omentum, and to such as are of very large size.

"4. No patient should be operated upon if the rupture can be well kept up by a truss."

These remarks apply quite as well to Chinese patients, and it seems to me that if we had a supply of suitable trusses, and took the utmost pains in fitting them accurately to our patients, at the same time using every means within our power to get them to return to us for observation, the number who would require a radical operation would not be very large. From time to time I have given trusses to patients, some of whom have returned, and they seemed to be kept in a comfortable condition by the

¹ Read at the monthly meeting of the Shanghai Medical Missionary Association, January 20, 1891.

use of the appliance. A greater number never returned to report, and I am unable to find out what benefit, if any, they derived from the appliance.

In the case of infants, I have used for some time the treatment advised by Mr. Coates. A folded skein of wool should have the end with the loop laid over the emptied inguinal canal, the other end being carried above the opposite pubes across the front of the abdomen, round the back and over the hip of the affected side. The free end is then passed through the inguinal loop, carried round the inner side of the thigh, and over the buttock, to be firmly secured to that part of the skein which is already just above the great trochanter. This does not chafe nor hurt the child, is easily readjusted, and can be applied so as to exert accurate compression, and in due time cure the hernial protrusion.

In conclusion, I may say that my purpose has been to speak of my own experience, and not to weary the reader with the general statistics of the operation. It is the fashion at present to present long and elaborate tables of statistics, and these are very useful. As, however, we in Shanghai have the advantage of access to a fairly large number of medical periodicals, and to a reasonable number of the latest books on medical and surgical subjects, I shall suppose that we are well acquainted with the general trend of the professional mind on this question. When I was at home three years ago I had the privilege of seeing the various operations for the cure of hernia performed by some of the leading men in America, England, and France, and of learning their opinions upon the subject. Although the operation of Macewen has (in his hands) possibly achieved better results than any other operator can claim, the operation has not been so successful in the hands of other equally prominent men, and it is doubtful if any one method can claim great superiority over that of its competitors. While all have their drawbacks, the operator must select the operation best adapted to each individual case, and here he can show his skill and good judgment.

VON GIETH'S DRESSING FOR THE CHEST IN PNEUMONIA AND PLEURISY.

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IN THE MEDICAL NEWS of March 21, 1891, is reprinted an item from the *Annals of Gynecology*, of February 18th, concerning "A New Method of Dressing the Chest in Pneumonia and Pleurisy," and recommending successive layers of pure collodion and absorbent cotton. It is undoubtedly true that there are many objections to this method, and it will readily occur to anyone that such a procedure is not only expensive and inconvenient, but not always available.

Von Gieth, Professor of General Medicine in the University of Munich, has given the treatment of chest diseases considerable attention, and his very great experience in the wards of the General Hospital of Munich lends additional weight to his eminent ability as a practitioner. Von Gieth does not approve of the many applications so well known to the profession, and is especially averse to the heavy, wet, and uncomfortable poultices of Indian meal, flaxseed meal, etc., so often employed in this country. Any wet application must rapidly cool and then the poultice ceases to be of benefit, and can be of more or less injury.

The one application which Von Gieth recommends, and which has proved so valuable in many cases, is *pure* olive oil (*oleum olivæ*). In all diseases of the chest, whether in infancy or old age, olive oil stands first and foremost, not only as especially soothing and agreeable, but as being best suited to maintain equable temperature where warmth is most needed.

Since 1872 I have witnessed the value of this treatment in many cases, and nothing can supply the place of olive oil in my practice as a grateful and healing local application in diseases of the chest, either acute or chronic. The oil must be the pure olive oil, and not some one of the substitutes so frequently offered as "just as good." Vaseline, lard, "goose-grease," "camphorated oil," are all preparations greatly inferior to pure olive oil, and cannot act in the peculiarly healing and soothing manner which we are able to obtain when we employ the latter.

The method which has been found most convenient is to pour the quantity of olive oil required into a moderate-sized bowl, which has been previously warmed, which will take off the chill from the oil. A large strip of soft cotton cloth (an old pillow- or bolster-case will give just what is required) is then prepared, to completely encircle the patient's chest. The strip is then placed in the bowl of oil until it is completely saturated, or rather super-saturated, with the material. This is then applied to the patient's chest, and outside this strip a second one is placed of dry cloth, and when necessary a third strip may be used. Flannel and linen are not suitable in this treatment—old, soft, white bleached cotton is what is needed. The strips are secured and held firmly in place by safety-pins.

This treatment will be found most acceptable to patients and successful in results. At first the idea of the oil next to the skin may be repulsive, but very shortly patients learn to like it and recognize the comfort its application is almost certain to induce.

I have called attention to this practice in the medical journals from time to time, and my experi-

ence in practice has convinced me that there is nothing better for external application in these serious and so often fatal diseases. Prompt action with the olive oil, hot-water bags, hot beef-tea, and whiskey punch, with simple expectorants, like the lozenges of mist. glycerrhiz. comp. made by Wyeth & Co., has often held the threatened attack of pneumonia successfully at bay, and has been the means of saving many lives. *Nursing*, and *not dosing* is the common-sense treatment of pneumonia. We are constant witnesses of cases, especially in old and delicate people, where this course of treatment, if used promptly and thoroughly, would be sufficient to save life, and where the need of it has been followed by a fatal termination.

It is well worthy of careful attention by medical men, and I think, without doubt, the employment of olive oil in chest diseases is steadily increasing.

TOPICAL TREATMENT OF DIPHTHERIA AND CROUP.

BY B. M. BEHRENS, M.D.,
OF CHICAGO.

In presenting this paper I wish it accepted as an argument in favor of an exclusively topical treatment possessing the aim of destroying the diphtheritic infiltration wherever it is found.

It will be agreed to by the medical fraternity that we have heard all we wish to hear about the general treatment of diphtheria and croup, and in spite of all assertions to the contrary, there is not one honest physician bold enough to proclaim this or that pet remedy as infallible. Whether it be given internally, or locally as gargle, vapor, or spray, it is sure to fail, except in cases of slight extent or infection, or in cases where Mother Nature herself succeeds in expelling the disease—but this is a complete failure so far as the efficacy of the remedy is concerned. There are, perhaps, physicians who still hold to the old creed, that diphtheria is a constitutional disease, with secondary local manifestations in the throat, and therefore they adhere to their pet remedy as being superior to all others; but in the minds of those who hold the other view, that diphtheria is primarily a local disease, and the constitutional symptoms secondary, it is evident that the present mode of treating it is inadequate. It is therefore, in my estimation—and my opinion is entertained by many—a Utopian dream to suppose that a remedy ever will be discovered whose specific action is of such a nature that it will check or counteract the production of toxic material or prevent its absorption. By this I mean a remedy of a chemical nature, and not one which may be discovered by bacteriology. Periodicals, and even the newspapers, are filled with “sure cures for

diphtheria,” that are tried to-day, to be laid aside to-morrow as sadly wanting. For, what can we expect but increased filth from remedies, taken internally or applied as gargles, sprays, and the like, the action of which on the diphtheritic plague can never be more than superficial? Whoever believes in any further effects is the victim of self-delusion, or of gross ignorance of the characteristics of the disease. And even if we must allow, to sprays at least, some mechanical effect—for instance, on the superficial layer of the diphtheritic infiltration—is it not more than likely that these will have no effect on infiltrations hid away in the deep pouches of the tonsils, or back of them? Besides, the danger lies not in the superficial layer of the infiltration, as we see it, as this contains only epithelium, pus cells and detritus, but in the deep layer of the mucous membrane, where absorption of the toxic products takes place, and the diphtheritic bacilli multiply. For this reason, and because as a usual thing the fauces are first attacked by the diphtheritic infection, what is demanded of us is the complete destruction of the infiltration, even if it must take place at the cost of some healthy tissue beside.

Some time ago I had the pleasure of presenting a paper on hypertrophic tonsils, in which I incidentally mentioned three cases of diphtheritic tonsillitis, with all the characteristic symptoms of the disease, which had come under my observation, and in which the disease was cut off, so to speak, by tonsillotomy. This result was, to my mind, satisfactory evidence that a removal, or, what is next best, a thorough destruction of the diphtheritic infiltration, is the sure cure, and that nothing else will answer. I regard it as an indorsement of the destructive procedure I have always followed in my practice, and from which I have never swerved, unless compelled by circumstances. I have never seen any reason to alter my views, or to abstain from this proceeding, unless the disease had assumed such proportions that it was beyond the reach of treatment of any sort. There are exceptions to every rule.

The shortcomings of my procedure are admitted in cases that come under observation late, and where the toxic symptoms pursue such a rapid course that we are only in time to witness the last struggles of the victim of the disease, although, even in the most desperate cases, agreeable surprises have taken place not infrequently. We give stimulants as long as there is a spark of life, and we are just as much justified in our efforts to destroy the infiltration as long as life exists. Unless the patient is moribund, and all hope of saving life is gone, I never hesitate in applying my method; and when I say that I have never regretted it, even in the most desperate cases,

this is the best recommendation I can give it. We must remember that even in such extreme cases as diphtheritic infiltration of the throat, nose, and larynx, the principal locality where the absorption goes on is in the throat; I mean in the tonsils and in their immediate surroundings, not only because this place is usually the first infected, but also because this part is most richly provided with glandular structure, which not only furthers the absorption of the diphtheritic poison, but also is the least likely to be interfered with by any remedy whose aim is only a superficial action, and not a total destruction of the infiltration itself. It is, therefore, in my estimation, no contra-indication that the diphtheritis extends above or below; on the contrary, by checking the main source of absorption, so much is done toward checking the spreading of the infiltration, that we can then regard infiltrations in other localities with a certain degree of ease. In short, I mean to say, that the disease is more than half conquered when we can succeed in destroying the infiltration *in* and *around* the tonsils. This may be deemed a bold assertion, but I can only say it is my conviction. But it will be willingly admitted, that with such complications as I have spoken of, the control of the disease is lost, more or less, so far as topical treatment is concerned. The difficulty increases in the same proportion that the infiltration extends, and the natural deduction from this is that the destroying process is best adapted, and most likely to give the best results at the onset of the disease. What is easy and feasible to-day, is perhaps out of the question to-morrow. If it were practicable, I should say, Never go to a case of diphtheria without the galvano-cautery; but I must limit my advice to nitrate of silver.

If this method be adopted, it will be a question for future solution as to what cautery is best adapted for the purpose of destroying the infiltration. I must hold to nitrate of silver, as being a remedy whose action is deep enough for the purpose, which does not extend further than we wish, and any superabundance of the agent can be immediately neutralized with a harmless stuff—common salt. My experience is limited to this, and because of its having served me so well in my practice it has become my pet remedy; but, of course, I am willing to give it up for another cauterizing agent, should one prove to be better. But the question here is only as to the merit of my proceeding.

To come, now, to the details of the application of my method, I will state that I never call on any case of throat disease without my head-reflector, tongue-depressor, cotton and cotton-holders, and the nitrate of silver. This I have mitigated with 10-per-cent. nitrate of potash, so that it will not so easily crumble or break. While it is melting I dip

my probes in it, one with a blunt, another with a cone-shaped, sharp point; this last for the purpose of bringing the cautery deep into the follicles of the tonsils. The ends of the probes are roughened, so that the nitrate of silver will not fall off. The first thing I do is to place the light so that I can with ease throw it from the reflector into the throat. As objections in some form usually are met with in small children, I place them with the lower half of the body on somebody's lap, while I take the child's head between my knees—the position we employ in treating eye diseases in children. By pressing the tongue down and mopping off most of the detritus, I can at once get an idea of the extent of the infiltration. The first object of my attack is the locality in and around the tonsils, and I always satisfy myself that the work is done here thoroughly for the above-mentioned reason. Next comes, in the same sitting or later, the cauterization of other localities. A little while afterward I apply with the cotton-stick a solution of common salt.

As above said, we have, to some extent, lost control where diphtheria extends upward to the nose or downward to the larynx—at any rate, so far as topical treatment is concerned; so I shall only add a few words about this complication of the disease. The treatment here must be symptomatic, and according to the severity of the symptoms. If the nostrils are clogged with mucus and pus, I apply a nose-douche of some non-irritant disinfecting fluid in grown-up patients; in small children the air-bag alone will do in many cases, and *must* do, as injecting in a child's nostrils usually meets with a stubborn refusal. From the effects of nitrate of silver in other localities, we may infer that this agent would be likely to do much good here also, but it would not be advisable to employ it in sufficient strength to be of any use, because of its irritating effect on the non-affected parts, as it often causes quite severe pain. With our inability to treat this part properly, it is consoling to know that there is no immediate danger to the patient's life, or very little, compared with the danger involved in diphtheria of the larynx.

Diphtheritic and croupous infiltrations are clinically the same disease. The edematous swelling of the laryngeal mucous membrane that accompanies the infiltration, together with the paralysis of the abductor muscles, are the main factors in bringing about the threatening suffocation. When I propose to apply here also the same agent, I am well aware of the difficulties and uncertainties of the procedure. Still it has been of so much service to me in my long practice that I feel compelled to recommend it. It is only fact, and not fiction, that cases that seemed to demand an immediate tracheotomy were benefited by the introduction of a 20-per-cent. solution of nitrate of silver repeated as often as the symptoms

required. For introducing this solution into the larynx I employ a bent cotton-holder having about the same angle as that which is used for introducing a tube into the larynx. After having soaked the cotton batting in the solution, I squeeze out most of it again, pull the patient's tongue out as far as it can be done without too much discomfort, and by a rapid movement introduce the instrument into the larynx. A choking spell, that soon passes away, indicates the success of the proceeding.

In many cases it is not practicable to pull the tongue out, but this same treatment can be made a success by simply pressing the tongue down with the tongue-depressor. As there is no harm in repeating it, if the first attempt fails, since the diphtheritic infiltrated fauces can easily stand a 20-per-cent. solution, it must not be given up until the choking announces its success. But, on the other hand, the more rapidly such manipulations are made the better for the patient and physician. How often these applications are to be made depends upon the severity and duration of the symptoms. To keep down the swelling in the larynx an external application of ice-bags, changed as often as required, will be found of very great utility, and children, after becoming used to them, will very often crave for them again, if they are taken away, although there is in any other way not much comfort connected with their use.

This is a general outline of my method of treating this disease. It would take me too long to detail it further, and I would probably trespass too much upon your indulgence if I further mentioned the advantages, and certainly, also, the shortcomings, of this proceeding, in dealing with a disease that just as often leads to good results under the most innocent and expectant treatment, as it baffles the skill of the most expert and conscientious physician. I have no statistics with which to support my statements. I can only say that for fifteen years I have treated no case of diphtheria in any other way. When one physician states that he lost some cases because his patients would not take the medicine, and another one that he never lost a case treated with this or that drug, then the value of statistics becomes very problematic. Only in hospitals for diphtheritic patients, where one or the other proceeding would be given a fair trial, would statistics be of any value. But, so long as no such opportunity exists, individual claims for this or that remedy or procedure must be considered of doubtful merit. I do not expect any unconditional acceptance of my views, but I do expect an unconditional surrender of the old ones. We owe thanks to the bacteriologists who have branded this disease as a filth disease, that is, one bred by filth and breeding filth, and one whose invasion usually starts in the throat. There is no loop-hole through which we can escape the

urgent necessity of doing away with the filth. Nobody would think of soaking a diphtheritic ulcer externally with some indifferent drug, but he would cauterize it in one way or another to bring about healthy granulations, and thereby check the hideous disease. And why not, then, do the same thing in the throat? What excuse is there, other than customary laziness or hopeless fatalism, for not even taking the trouble to inspect the throat, and for prescribing some innocuous drug that can only increase the filth, at best, but that can never have the effect of checking the production of the toxic material, or of preventing its absorption? We scoff at Christian-science healers and faith-cures, but if this way of treating diphtheria is not faith-cure, then I do not know what it is.

Before finishing my paper, allow me to mention what I consider a real advance in the treatment of this disease—that is, the use of the spray. It does not meet all the requirements, but I cannot help regarding it as a step in the right direction. It has a sound basis, so far as it intends to remove the filth, and aid in its expulsion and in the sterilization of the infiltrated part. But I fail to see how we can expect from it any effect at all comparable to that which destruction of the infiltration yields. I am more inclined to believe that these two agents—cauterization and the spray—employed simultaneously, would give the best results, but I have not employed the spray so often that I am prepared to speak more definitely about it. But, then, the spray would have to be employed almost continuously, and not only once in a while and by inexpert hands. If such a proceeding can hardly obtain any footing, it must rather be ascribed to the difficulty of practising what we preach than to the failure of the method.

Another achievement that apparently indicates progress is the intubation of a diphtheritic larynx. The dexterity which this implies would find a better field if it were used for the purpose of effecting a change for the better in the diseased condition of the larynx. This it cannot do, and has, therefore, no more justification than that of being a bloodless relief from suffocation. The enthusiasts do not claim more for it either, so far as I know, unless it is to raise the percentage of successful results upon those intubated, after it becomes more commonly adopted and improved in its working details. This has not been effected up to this time. About 30 per cent. saved sounds better than 70 per cent. not saved. In this it stands equal with tracheotomy, but in the infliction of suffering upon humanity it stands far above the latter procedure. How far it will succeed in replacing tracheotomy is a question the future will solve; but even if it does do so, I cannot see any grand achievement in the method as

a way of dealing with a filth disease. By either of these two methods the disease is being complicated, certainly from necessity, as long as fatalistic prescribing reigns supreme. But when the view once shall be commonly accepted, that a diphtheritic infiltration in the throat ought to be as severely dealt with as a diphtheritic ulcer externally, then there will be less call for either of them. If we are to attain this end, then it is our duty to arm ourselves with the head-reflector, to see for ourselves, to make the diagnosis, and to carry out the treatment, and not merely prescribe something. This reached, something better is sure to follow.

DEATH FROM INHALATION OF GASES GENERATED BY A GASOLINE STOVE.

By N. K. McCORMICK, M.D.,
OF NORMAL, ILL.

My attention was called to this subject by an accident, distressing in its results, which occurred in Normal, September 17, 1890.

At 8 o'clock in the morning of that day I was called hurriedly to the house of William Young. On my arrival I was first shown an infant aged four or five months, and was told that the child's parents were up-stairs and were thought to be dead. The child was almost lifeless, was barely breathing, and I could not detect any heart-beat. His hands and feet were cold. We applied heat and rubbed him with alcohol and hot water. This soon revived him, but we were obliged to continue the rubbing at intervals for an hour or more. As soon as I could leave the child, I went up-stairs and found the bodies of his parents in a small room, lying side by side on the floor, before a gasoline stove. The woman was lying on her right side, with her face away from the stove. The man was lying flat on his back, his shoulder and arm being thrown across her knees. It was evident from the position of the bodies that the woman had fallen first.

Before I arrived the neighbors had practised artificial respiration, but their efforts were of no avail. The room was small. The windows had been tightly closed. On a cupboard stood a lamp, which was still burning when the bodies were found. The stove was a "Globe, No. 5," manufactured by the Standard Lighting Company, of Cleveland, Ohio. The gasoline tank was entirely empty.

The developments at the inquest were substantially these: Mr. G. was a student of the Normal University. With his wife and baby he was keeping house in two small rooms. These rooms were not directly connected, but to go from one to the other it was necessary to pass through a narrow hallway. The front room they used for a sitting-room and bed-room and the back room for a kitchen. In the morning they were heard in the back room as early as 5 o'clock, and as late as 6 o'clock a young lady passing through the hall heard them talking with each other. At this hour there was no odor of gas in the hall, though the young

lady noticed that light shone through the doorway. On examination we found that the door did not fit well, and that considerable force was required to completely close it.

About 7 o'clock Mrs. Young heard the baby crying for a long time, and going up-stairs found it lying in its crib in the front room. She wheeled the crib through the hall to the door of the back room and at once noticed the smell of some gas. Getting no response to her rapping, she threw open the door, and saw the bodies lying on the floor. She left the baby lying in its crib in the doorway, rushed down the stairs, and gave the alarm. Neighbors hurried in, took the baby down-stairs, and threw open the windows of the room. The man who was first in the room stated that he heard a noise as of gas escaping from the stove, and he at once closed the valves of the burners. He did not know whether there was any flame at the burners or not. A young lady who was next in the room stated that a lamp standing on the cupboard was burning, and that she turned down the flame.

The question was put to the man, "Did the gas smell like the vapor of gasoline?" His answer was "No; it was more like the smell you get from a hard-coal stove when you see a blue flame." The young lady did not hear him testify, but in reply to the same question, she said: "No; it was the same smell you notice when you first light a fire in a hard-coal base-burner stove."

From what I know of this case I am convinced that death was due to the accidental inhalation of some poisonous gas. It could not have been simply the vapor of gasoline, for the lighted lamp would surely have ignited that had it been present in any quantity.

Gasoline consists essentially of a mixture of three forms of hydrocarbon—pentane, hexane, and heptane. The normal product of combustion of gasoline is carbonic acid gas. To effect complete oxidation, an enormous quantity of oxygen is required, a hexane hydrocarbon requiring nine and one-half volumes of oxygen to one volume of gas.

There are three gases which might have been formed, any one of which could cause death if present in sufficient quantity. These three are acetylene, carbonic acid gas, and carbon-monoxide.

Acetylene exists in coal gas, and possesses a high illuminating power. It is formed by the imperfect combustion of organic gases or vapors, and gives the disagreeable odor detected in a room where a lamp has been burned "low" for some time. Liebreich, so long ago as 1868, pointed out that acetylene forms a combination with the haemoglobin of the blood, and in quantity it must be considered a poison.

Carbonic acid gas (CO_2) is essentially the product of decomposition. Among its sources of production are respiration, fermentation, and oxidation of

vegetable and other organic bodies. It constitutes the choke-damp or after-damp of the miners, and is the principal cause of death in coal-mine explosions.

In cases of carbonic acid poisoning, if the gas be pure, it causes death instantaneously. It produces spasm of the glottis, and death is immediate from apnoea, none of the gas being able subsequently to enter the lungs. When this gas, somewhat diluted, is inhaled, there is immediate loss of muscular power. The patient drops without a struggle, unable even to call out. When the gas is still more diluted the patient complains of tightness in the throat, or heaviness and pain in the head, of drowsiness, of ringing in the ears, and there is a gradual loss of muscular power. There is lividity of the countenance, violent cardiac action, hurried respiration, and, in rare cases, convulsions and vomiting. These symptoms are followed by a state of complete coma. The amount of carbonic acid gas which must be present in a room must be viewed from two standpoints.

First: Where air is contaminated simply by the addition of the gas.

Second: Where, as in this case, the carbonic acid gas is produced in the apartment by combustion or respiration, or by both.

Here the normal oxygen of the air is consumed in the production of the carbonic acid gas, so that, while the amount of gas in the room is increasing, the amount of oxygen is decreasing, which makes the increase of the proportional amount of carbonic acid gas in the apartment very rapid.

Each adult requires for safe respiration 20 cubic feet of air each hour. An ordinary candle will vitiate the same amount of air in this time.

The room in which this accident occurred was closed tightly except a very small space about the doorway, which was noticed only from the fact that light shone through it. The room measured 10 by 13 feet on the floor, with the ceiling eight feet high, giving a total capacity of 1040 cubic feet.

Tending to vitiate this air we have :

First. The respiration of two adults.

Second. The burning lamp.

Third. Four burners of the gasoline stove.

Two adults would vitiate in one hour 40 cubic feet of air. The lamp would vitiate fully 60 cubic feet. A stove burner, in its consumption of gasoline, represents a power equal to thirty or forty candles, so that each burner will, in one hour, vitiate 600 cubic feet of air, and the four burners would vitiate 2400 cubic feet.

While we have a room containing only 1040 cubic feet of air, we have agents capable of vitiating more than twice that volume in one hour. The fact that the door was slightly ajar does not permit us to

hold so precise an estimate as the above to be strictly accurate, but the opening was so slight, and the agents of vitiation so overwhelming in their force, that the conclusion reached must be the same.

The carbonic acid gas has a specific gravity of about 1.5, and would be more dense near the floor, so that a person stooping over would necessarily inhale more of the gas than when standing erect. While this alone could cause the accident under consideration, there is a third gas which must also be considered.

Carbon monoxide (CO) is a colorless gas, having a slight odor. It is breathed into the lungs freely, and is a very active narcotic poison. It is generally held that the poisonous action of carbon monoxide depends on the formation in the blood of a compound of the gas and haemoglobin, giving the blood a bright-red arterial appearance. This compound is fixed and stable.

We are all familiar with cases, or accounts of cases, where poisoning has resulted from the inhalation of carbon monoxide thrown out from a hard-coal base-burner. Two such cases have already occurred in this county during the year.

In these cases the formation of the gas can be easily explained. Air enters at the bottom of the grate and carbonic acid gas is formed; this passes up through the grate, and taking up more carbon, becomes carbon monoxide.

It is my belief that in this case the deaths were due to the presence of both forms of carbon gas. Primarily, the carbonic acid gas was present as the product of combustion, but not in a quantity sufficient to cause death of itself, for in that case combustion would probably have ceased.

After the stove had been burning for some time, the supply of oxygen became limited, and the product of combustion was carbon monoxide rather than carbonic acid gas.

I believe that Mrs. G. noticed the odor of the carbon monoxide, and stooped down by the stove, possibly to adjust a burner, and while in this position inhaled enough of the gas to be overcome by it at once. Her husband stooped to aid her, when he was also overcome by the fatal gas and fell across her body. Death in each case was practically instantaneous.

It is a matter of great regret to me that I did not make a post-mortem examination of the bodies, at least to the extent of examining the condition of the blood. That alone could have decided positively the exact cause of death. Had the blood been wholly arterial we would know that death was caused by carbon monoxide gas, while if the blood was wholly venous, we would know that the carbonic acid gas was the cause of death.

Some weeks later I was called to another house about the same time in the morning.

Arriving there, I found a woman reclining on a bed. I was told that she had fallen over suddenly, but that she recovered consciousness soon after the messenger started for me. She stated that she was subject to such attacks and needed no treatment. Before leaving I noticed a gasoline stove, of the same make and pattern as that used by Mr. and Mrs. G. I examined the stove carefully; it was burning well, and no odor of gas of any kind was perceptible, even close to the burners.

I have since learned that soon after I left the house the woman again lost consciousness and that her son fell to the floor as in a faint.

Neighbors rushed in and at once pronounced it another case of gasoline poisoning. These neighbors stated that there was a strong smell of gasoline in the room. The patient, and the woman who was attending her, both state that at no time could they detect any unusual odor.

The doors stood wide open, and I do not understand how any such accident could have taken place in a room so well ventilated. I am positive that the patient's first attack was not due to any such cause. Her son was badly frightened when I was there, and I think it quite possible that he fainted on seeing his mother's condition.

I have been told of this case, which occurred in Bloomington:

A large, strong man was overcome by gas while bathing in a small bath-room. The water in the tub was heated over two large gasoline burners. This accident was undoubtedly due to the presence of one or both forms of carbon gas. The room was small and the oxygen present was quickly consumed by the large burners of the heater, leaving an atmosphere heavily charged with carbonic acid gas. Happily, he was heard to fall and was rescued at once. He was unconscious at the time, and had he not been promptly removed from such an atmosphere would surely have perished.

I cannot see that in the case of Mr. and Mrs. G. any blame can be attached to this special make of stove, for such an act can and will occur with any other make of stove under the same conditions. Neither do I think we should condemn the use of gasoline stoves in general.

The practice of heating water in bath-rooms with the gasoline heaters I believe should be condemned, for the reason that extra-large burners are used, consuming the oxygen very rapidly, while the rooms are almost invariably small and poorly ventilated. There is, also, the danger that the victim might fall face-down in the tub, in which position a few inches of water would suffice to drown him.

I cannot learn of any other accidents similar to that happening to Mr. and Mrs. G. This is probably due to the fact that these stoves are used almost exclusively during warm weather, when the doors and windows of houses are open, affording free ventilation. This calamity was essentially due, not to the use of the gasoline stove, but to the insufficient supply of oxygen. What I wish to urge is not the disuse of gasoline as a fuel, but the importance of an abundant supply of fresh air; for with proper ventilation such an accident cannot occur.

ORIGINAL LECTURES.

SOME OF THE PRINCIPAL VARIETIES OF DELUSIONS MET WITH AMONG INSANE PATIENTS.¹

BY HENRY M. LYMAN, M.D.,
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I SHALL detain you but a short time in considering some of the principal varieties of delusion that are met with among insane patients. We find there are delusions among patients who are the victims of mania which have a characteristic form; there are delusions which are met with among cases of melancholia that have characteristic features; there are also delusions among the victims of general paresis which have marked and peculiar characteristics; and lastly, there are the delusions of paranoiacs that have decided family characteristics. The delusions of mania and melancholia are the most varied and have the least stability in their type. Patients who are maniacal present the delusion of exaltation as a general rule. They fancy they are gifted with great powers; that they have made great discoveries, or that they are endowed with remarkable qualities. But they have no very definite and sustained framework for this delusion. The delusion to-day is about one thing, to-morrow it is about another thing, and the next day still another object. I remember the case of a patient who was maniacal. It was what might be called a case of mania secondary to pneumonia. She labored under the delusion that she had been in heaven and was entrusted with a message to her husband, but though frequently alluding to this, she never could give any form to this narrative, and she did not describe the experience she had in heaven. The only thing she could say was that she had been in heaven and was entrusted with a message from God to her husband. She could not tell what the message was. After a few days the mania subsided and she recovered without any persistent form to the delusion.

Then again, in cases of melancholia the delusion is in like manner unstable. It is not definite and has no persistent framework. It is usually of a desponding character. The patient is overwhelmed with a sense of misfortune, of wrong-doing perhaps, and yet can give no definite shape to it. I have seen patients laboring under this form of delusion who would complain of

¹ Remarks made at a recent meeting of the Chicago Pathological Society.

having done something that was very wrong indeed. They felt bad, but could not tell exactly what they had done.

A gentleman came to see me (brought by his physician), a banker, a man of wealth and fortunately situated, who was suffering with the characteristic ill-health manifested by cases of melancholia. He was oppressed with this feeling of something wrong, a general discomfort which he could not name, describe, or give reason for. I asked him if his business troubled him. He said "No, it was not that;" and his physician assured me that it was not his family affairs, as they were pleasant and harmonious, yet he had a sense of oppression without giving a definite account of the fragmentary delusions under which he was laboring.

In general progressive paresis we find there is a marked state of delusion; it often assumes a more definite shape than do the delusions of true mania or melancholia.

I remember a patient suffering with mania when I first visited him, who said that he had discovered a method for squaring the circle, and he undertook to explain the matter to me, but as soon as he tried to do so he got confused and could not explain it. The next day he was forgetful entirely of his delusion of squaring the circle and imagined himself to be an electrical apparatus. He would place his knuckles near the face of the person near him and say "Don't you feel that shock?" The next day he would forget all these notions, and the delusions under which he labored would assume an entirely different shape. In general paresis patients labor under some distinct and definite delusion which assumes a shape that is oftentimes constant, but it does not usually persist for a long period of time and does not so thoroughly dominate the life of the patient as do the delusions of paranoia, yet these delusions often systematize themselves very considerably in general paresis. I once went to see a patient who was suffering in the early stages of general paresis. He was very considerably excited, and labored under the delusion that he had considerable property under his control, and this property was in his back-yard. He had established there an extensive tree plantation. He took me into his yard and showed me the trees he had there. There were trees from Sweden, Germany, and other valuable trees brought from different parts of England, Scotland, and the Eastern States. He then told me his plans. He was going to establish a saw-mill and cut a canal through to the Mississippi River. He showed me the canal he had started behind the back-fence in his yard. There was a little muddy canal and this was supposed to reach the Mississippi River, and barges and steam-boats would come up to take away the property he was going to manufacture there, and he was going to amass an immense fortune in that business. This was a very systematic and constant delusion under which he was laboring, but it was a secondary consequence of a primary disease. Such delusions terminate in a comparatively short time with failure of the mental powers—in fact, the patient lapses into a condition of complete general paresis, the mental faculties disappear, and at last the patient forgets about his delusions, has no more of them, gradually sinks, and dies.

When you observe a paranoiac you soon discover that

his delusions are of a more definite and constant character than those which I have mentioned. They frequently persist as long as the patient lives, and the patient's condition is not a consequence of some other form of brain disease, but it is the result of a faulty development of the brain structure itself. A large number of paranoiacs are born with such a defective condition. They have perhaps inherited their form of brain disease or defect; or they have acquired it through faulty habits of life, and the children that are born of such persons have a predisposition in certain morbid directions, which is the primary cause of their trouble. They are not physically diseased; that is, they have no morbid tendency to particular forms of inflammation, degeneration or other change in the brain structure, but their brain was constructed originally upon a faulty plan, and out of that defective formation has developed the peculiarity of the delusion to which the patient finally becomes subjected. The delusion that exists is a permanent thing, so to speak, continuing as long as the patient lives. Unless he contracts some intercurrent disease he may live in comparatively perfect health, and may attain to a reasonably old age. That is why the delusions are so persistent, and why they have the characteristic of being what is called systematized. We speak of the delusions that occur in mania, in melancholia, and the majority of those that occur in general paresis, as being unsystematized. They are dependent upon varying conditions in the brain. The brain disease is the cause of the delusions, and as the brain changes its condition through disease, excitement, or depression, the delusions will correspondingly vary, finally becoming extinct with the extinction of intellectual life. But in the case of the true paranoiac his bodily health is perfect, his brain is not the seat of inflammation or any particular degeneration, but he goes along leading this warped and twisted life, his perceptions giving rise to delusions which grow out of the defect in the action of the logical machinery of the mind in the brain. For instance, Dr. Clouston tells us of a man who insisted that two and two did not make four, but four and a quarter. He was an expert accountant and kept the books of the asylum with which he was connected, using the ordinary system of mathematics, but it was all wrong. He spent much of his time in working out problems in Euclid and in constructing logarithms according to the theory that two and two made four and a quarter. When he died he left immense manuscripts to the University of Oxford. Now, this man had a twist in the construction of his brain, and as a consequence of that defect the perceptions derived from the external world gave rise to delusions which were not to be considered as the products of disease, but rather as consequences of defective organization of the brain.

A CASE OF FRACTURE OF THE ORBITAL PLATE OF THE FRONTAL BONE, WITH RECOVERY WITHOUT AN OPERATION.

BY FRANK W. THOMAS, M.D.,
OF PHILADELPHIA.

THE following case which I report is of interest, not only because it is somewhat unique, but because of a certain medico-legal bearing which it may have, as illus-

trating the possibility of serious injury to the skull and its contents, without sufficient external lesions to even suggest the nature of the injury; and because its lesson is somewhat opposed to a rule laid down by Dr. Deaver in a paper read before the Philadelphia Neurological Society, on January 27, 1890, in which he makes the following remark: "I trephine when I suspect extra-dural haemorrhage in fractures of the orbital plate of the frontal bone."

About eight o'clock in the morning of November 20, 1889, I was summoned to see W. L., a carpenter, who, while working in a house in the course of erection near the old "Indian Rock," Chestnut Hill, fell from a height of over thirty feet, striking his head upon a plank.

The lesions and symptoms presented were:

(a) Swelling and ecchymosis of the right peri-orbital region and cheek, and very slight excoriation above the brow.

(b) Impacted fracture at the right wrist-joint.

(c) Contusion of the arm, chest, and leg on the right side.

(d) Sensation was complete, and while the patient was somewhat "dazed," he was able to describe his position and fall, with sufficient accuracy to tally with the descriptions given by the companions who bore him home.

At this time there were absolutely no symptoms of compression.

The arm was dressed, the contusion about the orbit treated by warm stupes of the distilled extract of hamamelis, and the patient was given internally kali bromid., gr. xx., with morph. sulph., gr. $\frac{1}{8}$.

In the evening I found the patient quiet and sleeping, but easily aroused, and less capable of sustaining mental effort than in the morning. For some fever and rapid pulse I gave drop doses of tr. aconit. rad. and tr. belladon. every two hours.

By the morning of the next day (28th) the somnolence had developed almost into coma, nourishment being swallowed but automatically.

The decubitus was lateral (principally on the right side), the arms were drawn up and flexed over the chest, and the limbs drawn close to the body; the tongue dry. The patient remained in about the same condition for forty-eight hours, and then somnolence began to be less profound.

By this time the swelling had so far subsided as to admit of the outlines of the orbit being examined; and I was surprised to find, at the point of the supra-orbital notch, a depression into which the little finger could be placed, and a bulging was felt within the roof of the orbit pressing upon the eyeball. The right eye was pushed down and was lower than the left; but at that time, owing to the swelling which still existed, I regarded the deformity as apparent rather than real.

December 1 and 2. The patient had lost somnolence, and had become actively delirious, tossing from side to side, constantly talking, with hallucinations, and all the symptoms of cerebral irritation.

7th. The patient much improved. Intellect clearing, but concentration of thought and ideas of time completely absent. He remained quiet, but was easily aroused and quickly "dozed off" again; recognized those about him, but astonished them by the most irrele-

vant questions. Dr. A. F. Muller was called in consultation, and together we carefully examined the skull, and found, in addition to the injury described, that the whole right frontal bone seemed to be depressed, and the line of the medio-frontal suture appeared as an elevated ridge.

The question of trephining was considered; but as nothing was to be gained, we determined to await results, which have since proved in every degree satisfactory.

The patient slowly, but steadily, improved, the mind daily growing more clear, and muscular contraction, which had been lost to a certain extent, became more and more perfect.

Double vision remained, and I had my friend, Dr. C. S. Turnbull, examine the patient's eyes, the report of which I append:

"Eye (R.) mechanically displaced downward and slightly outward, and muscular action limited on account of pressure of the roof of orbit. Homonymous images (double), and R. displaced more or less below L. and normal position. Refraction Hy. As. Ophthalmoscopic examination negative."

The points of special interest in this case are:

First. The possibility of a blow upon the sharp supra-orbital ridge, sufficient to cause fracture and downward displacement of orbital plate, without cutting the skin, particularly as the character of the fracture would lead to the belief that the patient in falling struck the edge of the plank.

Second. The presumable extra-dural haemorrhage, as evinced by a succession of symptoms:

(a) Momentary stunning at time of fall.

(b) Immediate regaining of consciousness.

(c) Gradual supervention of coma.

(d) Succeeded by slow awakening of intellect.

Third. The question of appropriate treatment. Had the trephine been used and recovery taken place, to surgical interference would have been given the glory. Had operative interference been called for by the urgency of the symptoms, I think that the operation suggested by Dr. A. F. Muller, of introducing an inflexible, flat elevator above the ball of the eye and moulding the depressed fragments back into place, would have held out the greatest probability of a successful result.

At the present writing, six months since the accident, the patient seems intellectually completely recovered. He has been steadily working at his usual occupation since last May, but a certain amount of deformity remains. His double vision, under the influence of an appropriate pair of glasses, gave him no trouble whatever; and now, even without glasses, the eyes have completely gained binocular vision and normal sight.

6 MOUNT AIRY AVENUE.

MEDICAL PROGRESS.

Angina Pectoris.—Dr. R. DOUGLAS POWELL, in *The Practitioner* for April, reaches the following conclusions in regard to this dangerous and painful affection:

Angina pectoris is an innervation of the heart or vessels, associated with more or less intense cardiac distress and pain, and a general prostration of the forces, always producing anxiety, and often amounting to a sense of impending death.

1. In its purer forms we observe disturbed innervation of the systemic or pulmonary vessels, causing their spasmotic contraction, and consequently a sudden extra demand upon the propelling power of the heart, violent palpitation, or more or less cramp and paralysis ensuing according to the reserve power and integrity of the organ—angina pectoris vasomotoria.

2. In other cases we have essentially the same mechanism, but with the extra demand made upon a diseased heart—angina pectoris gravior.

3. The trouble may commence at the heart through irritation or excitation of the cardiac nerves, or from sudden accession of anaemia of cardiac muscle from coronary disease—primary cardiac angina.

4. In certain conditions of blood or under certain reflex excitations of the inhibitory nerves, always, however, with a degenerate feeble heart in the background, we may observe intermittence in its action prolonged to syncope—syncopal angina.

Ligation of the Common Carotid Artery in Tonsillar Haemorrhage; Recovery.—T. D. DUNN reports a case of a boy, three and a half years old, of a rather lymphatic temperament, with no history of haemophilia in his family, who was attacked by abscess of the right tonsil which opened spontaneously, discharging a considerable amount of pus and blood. Twenty-four hours after the first discharge he vomited several large clots after having been asleep for some hours, and fainted from loss of blood. The haemorrhage at this time was controlled by the application of Monsell's solution. Forty-eight hours later a similar haemorrhage occurred, the bleeding being checked by powdered alum. Great exhaustion and fainting were present. Within the next three days several equally severe haemorrhages occurred, and the child's condition became exceedingly critical and finally so serious that it was considered necessary to ligate the common carotid artery in order to prevent further haemorrhage. Rapid recovery took place, the wound uniting without suppuration and the stitches were removed on the eighth day. The rapidity with which the child made blood was remarkable, as was also the absence of any cerebral symptoms.

Methyl-blue as an Anæsthetic.—PIETROWSKI has verified the statement of Ehrlich that methyl-blue is possessed of anæsthetic power to a remarkable extent. He has administered it both by way of hypodermic injections and by the mouth, to ten cases, including patients suffering from acute rheumatism and neuralgia of the intercostal, supra-orbital and sciatic nerves, as well as from lumbago. In all of these cases the urine became first green and then blue. After these injections there was some redness and tumefaction and perhaps some pain. In every case the pain was diminished.—*Revue Internationale de Bibliographie*.

Treatment of Acute Coryza.—In individuals who are subject to repeated attacks of coryza it will very frequently be found that the trouble depends upon a disorder of the general nutrition, which must be improved before a complete cure can be obtained. In addition to this it is absolutely necessary that a thorough examination of the nasal chambers shall be made in order that

local applications may be applied. Generally inhalations of a mixture of carbolic acid or ammonia are useful, and the following may be employed:

R.—Pure carbolic acid	80 grains.
Aqua ammonia	1 drachm.
Water	4 drachms.
Alcohol	4 "

Several drops of this may be placed upon bibulous paper in the form of a cone and the vapor inhaled for a few seconds. Sometimes the disease may be aborted by the employment of atropine, and antipyrine may be used for the relief of the headache. As the disease progresses the following powder may be used as a snuff:

R.—Subnitrate of bismuth	1½ drachms.
Powdered benzoin	1½ "
Boracic acid	1 drachm.
Menthol	3 grains.

Five or six times a day a pinch of this powder may be snuffed up into the nostrils, or in other instances a powder composed of small amounts of morphine and calomel is useful.

For the relief of the excoriation about the nostrils an ointment composed of equal parts of subnitrate of bismuth and vaseline may be employed.—*Journ. de Méd. de Paris*.

Ointment for Eczema.—

R.—Thymol	30 grains.
Oxide of zinc } of each	6 drachms.
Starch	
Lard	1½ ounces.

Apply twice a day to the affected part.—*Journ. de Méd. de Paris*.

Ichthylol in the Treatment of Dyspepsia.—STOCQUART is quoted by the *Revue Internationale de Bibliographie* as having recorded seven clinical observations regarding the use of ichthylol, for the purpose of relieving vertigo and other cerebral disturbances arising from simple dyspepsia or indigestion in the gastro-intestinal canal. He found that when ichthylol was administered with the bromide of potash, the latter drug was very well borne by the stomach, and that the appetite was improved simultaneously with the increase of digestive power.

The Treatment of Hiccough.—The *Gazette Hebdomadaire* gives the following treatment for hiccough. The local treatment is to compress the phrenic nerve and the pneumogastric in the neck by pressure with the index finger, which will often cause immediate cessation of the spasms. The medicinal treatment consists in the administration of a coffee-spoonful of vinegar mixed with a little powdered sugar, or the following formula may be used:

R.—Subnitrate of bismuth	45 grains.
Oxide of zinc	
Valerianate of zinc } of each	1 drachm.
Powdered calumba	
Powdered opium	½ grain.
Essence of anise, a sufficient quantity.	

Mix thoroughly, and give half a teaspoonful of this powder in a wineglassful of sweetened water.

CURRENT LITERATURE.

SATURDAY, MAY 9, 1891.

PARTIAL EPILEPSY OF SUB-CORTICAL ORIGIN.

DUFLOCQ, in a contribution to the study of cerebral localizations, reports an interesting case of partial epilepsy in which the cause of the paroxysms—an old and well-encapsulated blood-cyst—was without any point of contact with the cortical layer of the brain, but was completely separated from the gray substance by an absolutely healthy layer of white matter. The patient was a hatter, forty years of age, who gave a history of a fall from a step-ladder twenty years before, striking upon his head. There was no loss of consciousness and no subsequent pains in the head. He had had no syphilis, nor had he ever handled the acid nitrate of mercury. Three days before his admission into the hospital he was suddenly taken with a form of aura, consisting of a constriction which began at the epigastrium and in a few moments mounted to the throat, thence radiating toward the left side of the jaw. The patient heard a loud noise, which seemed to resound in the left half of the head and the left side of the chest at the level of the semi-lunar space. Severe pains in the head were felt, which persisted throughout the attack. The attack commenced at the moment the painful constriction reached the throat. The first phenomenon was a drawing of the tongue backward, so that respiration was impeded; then the head was turned slightly toward the left and inclined upon the left shoulder. The left corner of the mouth was drawn toward the ear; the mouth was slightly opened and held so. The eye did not participate in the convulsions. The movement extended to the shoulder, but the muscles of the arm and forearm remained relaxed. The head was strongly held by muscular contraction to the left shoulder during the paroxysm. The end of the crisis was marked by a pretty abundant salivation, which commenced a little previous to the end. The tongue was hard and could not be drawn out. The patient could emit only unintelligible and hoarse sounds, but memory and consciousness were well preserved. The pulse was regular and the respiration preserved its normal rhythm. After the attack there existed a facial paresis. There was no febrile elevation. Successive attacks were followed by loss of consciousness, increasing stupor, and death five days after admission. Trepanation was performed on the morning of the last day, with very marked amelioration of the symptoms. The patient spoke, drank, and watched a game of dominoes, but death occurred suddenly in the evening.

The autopsy revealed no deformity of the cranial walls. The brain and dura and pia mater were intact. The left hemisphere was normal. Examination of the surface of the right Rolandic region showed nothing abnormal. The fissures were clearly marked and the gray matter presented its usual

coloration. An antero-posterior section, made just above the plane of the corpus callosum, revealed a brownish-red mass in the middle of the white substance corresponding to the lower extremity of the ascending frontal convolution. This mass was rounded in form and the size of a billiard-ball. It was surrounded by two concentric zones—the inner one clear yellow and of a slightly softened consistency; the outer one was of the consistency and ordinary appearance of the white substance. Finally, toward the surface of the convolution was a perfectly intact band of gray matter. A vertical and transverse section at the level of the foot of the ascending frontal (the frontal section of Pitres) showed the approaches to this rounded mass to be reddish in color. The mass was found to be composed almost entirely of the white substance of the lower frontal fasciculus (the foot of the ascending frontal), and the region of the island was intact. The external capsule was far distant from the diseased focus. There was no atheroma of the arteries of the base of the brain. The brownish mass was firm and was composed of a central portion of a mahogany-colored detritus, slightly foliated and manifestly consisting of blood. Around this was a shell, firm but thin.

It is quite exceptional to see a tumor situated in the white substance give rise to a partial epilepsy. Duflocq has searched medical literature and has succeeded in finding only three cases which are analogous to the one above reported—those of Osler (*American Journal of the Medical Sciences*, January, 1885), Taddeo de Hyeronimus (*Riform. Med.*, 1887), and Bouveret (*Lyon Méd.*, September 28, 1884). The clinical study of the patient above recorded reveals a certain number of functional troubles which appeared at the same moment as the epileptic crisis and which constituted it. These are the traction of the tongue backward, the retraction of the labial commissure, the opening and contraction of the mouth, the constriction of the pharynx, and the alteration of the voice. To each of these troubles a cortical centre corresponds, which numerous experiments and a few rare clinical observations have located in the lower third of the ascending frontal convolution. But it was in the white substance immediately adjacent to this limited region that the autopsy of this patient showed the existence of a hard, small, and perfectly circumscribed focus, of very old date, and one which could not have determined any lesion in the vicinity. All the centres involved indicated in a very positive manner that the seat of the lesion was the foot of the ascending frontal convolution; and if it is established that partial epilepsy may be of subcortical origin, the operator should feel authorized to search, in analogous cases, even in the white substance subjacent to the cortical centres for the original cause of the epileptiform accidents noticed in the patient.—*Revue Médicale*, Feb. 10, 1891.

PURULENT OPHTHALMIA OF THE NEWBORN.

PROFESSOR DE LAPERSONNE (of Lille), in a report presented to the *Société Médicale du Nord*, gives the

following instructions upon the subject of purulent ophthalmia in the newborn:

" Purulent ophthalmia of the newborn is a very grave disease which every year renders blind a large number of children. Official statistics prove that one out of every three cases of blindness in children is due to this disease. This blindness might have been avoided by care, intelligently and promptly bestowed. The ophthalmia commences ordinarily on the day after birth; but it may begin toward the eighth or tenth day. It manifests itself by a swelling and redness of the lids, which prevents the eye from opening. There flows from the eyes a fluid at first clear lemon-yellow, then thick and creamy, then greenish. If the affection is not energetically treated, the eye, becoming involved by the fourteenth or fifteenth day, will be perforated, its humors escaping. Complete and incurable blindness will be the consequence of this accident.

" The secretion which flows from the eyes is virulent and contagious; it transmits the disease to the other eye, if only one eye has been at first affected; it produces ophthalmia in other children, if the necessary precautions are not exercised; transported by insufficiently washed hands, it may become the cause of that terrible accident, peritonitis, in the newly-delivered. To escape these grave dangers it becomes necessary to take the following precautions:

" 1. Antiseptic vaginal injections should be made before delivering the woman, whenever the abundant leucorrhœal discharge gives rise to fears of contagion for the child.

" 2. In all children, immediately after birth, before the bath, the lids should be washed with an antiseptic solution, by means of a fine linen cloth, which is very suitable, or better still, by means of a small tampon of antiseptic wadding. For this purpose either a solution of phenic acid, 1 to 100, or equal parts of boiling water and Van Swieten's fluid, or a solution with the following formula will suffice:

No. 1.

R.—Sublimate	$1\frac{1}{2}$ grains.
Tartaric acid	3 grains.
Distilled water	3 oz. 2 drachms.

" Immediately after this the lids should be opened and a drop of the following collyrium should be allowed to fall into each eye from a dropper, a glass rod, or simply a roll of paper:

No. 2 (in colored bottle).

R.—Silver nitrate	2 grains.
Distilled water	2 $\frac{1}{2}$ drachms.

" These formulæ may be handed to the midwives; all that will be necessary will be to give the direction 'For the eyes.' These bottles should always be carried by midwives in addition to other articles indispensable for accouchement.

" 3. If, in spite of these precautions, the first signs of swelling and secretion present themselves, the physician should be immediately summoned, and he alone should make the necessary cauterizations.

" 4. Whenever it becomes necessary to treat a purulent ophthalmia, all the articles which are to serve for the dressings should be carefully placed on one side. After each washing of the eye the linen cloths or the wadding which have been used should be burned. The hands should be properly washed with soap and soaked in a solution ready prepared for this purpose, consisting of phenic acid, 1 to 40, or the undiluted Van Swieten's fluid."

According to Professor de Lapersonne, it is because of these rigorous precautions that the midwives now escape these accidents, unfortunately too frequent.—*La Médecine Moderne*, March 5, 1891.

PUTRETFIED MILK IN THE BREAST.

JORISSENNE reports a rare and curious case which occurred in his practice during the year 1874, and which, for want of an explanation or any comparison with a case more or less analogous, he had refrained from publishing hitherto. The facts of the case are as follows:

Mrs. P. V. was delivered with the aid of forceps on the 5th of October, 1874. The sequelæ were normal and she had regularly nursed her child. Of a rather delicate constitution, small, pale, with flushed cheeks, of a lymphatic temperament, possibly not without tuberculous taint (although still living and with less pathological appearances than formerly), she was a good specimen of a blonde. Her child was well developed, but in 1875 it suffered with the milk-crust. On the 7th of December she took a short trip and remained away about seven hours and a half. On her return she hastened to give it its nourishment, and it suckled eagerly. A foetid odor, however, disseminated itself with the milk. The husband and the other members of the family left the room, compelled to hold the nose. It was, they said, intolerable; a sulphurous and extremely offensive odor, resembling putrid eggs, with a mixture of sour acidity. The mother herself became ill from breathing these disgusting emanations, and the child vomited some time later. Jorissenne did not see the patient until the next day, at which time none of the sheets soiled by the vomited food retained the foul odor. The patient did not at that time seem to be suffering any ill effects from the trouble of the previous day. The breasts did not present any fissure nor any trace of engorgement; the milk was no longer odorous. On questioning, it was learned that the milk had remained three times as long as ordinarily in the glands, without occasioning any difficulty, even moderate in amount. The two breasts, nevertheless, had contained vitiated milk. The woman also confessed that several times her milk had begun to become offensive, but to a less degree, when the interval between the nursings had been too considerable. It is necessary to add that her trip had been rapid and fatiguing. An hour of carriage-riding and five hours and a half of rapid walking had been broken by only an hour's rest at the table. This, however, will not explain the peculiar odor of this putrefaction. Whence came the germ of decomposition? At the time none of the milk was

preserved to ascertain if, upon becoming putrid, it would give rise to phenomena analogous to those of the first occasion.

The conduct of the child is no less of interest than were the heteroclitic alterations in the mother. It sucked the infected milk with the same avidity it evinced when swallowing the nutriment in its normal condition. There was no evidence of repugnance on its part, no hesitation, no unusual interruptions. Neither the taste nor the odor caused it to reject the food. The odor of the milk was beyond doubt, since all who were in the room were compelled to beat a hasty retreat. The child, however, was unaffected. It is fair to conclude that the sense of smell in an infant is but slightly, if at all, developed. It can hardly be believed that milk possessed of such an odor should be sweet and agreeable to the taste. It is probable that the savor was associated with some alteration in the taste, the sour acidity which was noticed probably indicating such a change. Various experiments have shown that the sense of taste perfects or develops itself with age. It is, therefore, probable that the ability to discriminate between the taste of pure and tainted milk was but poorly developed in this child, probably to no further extent than was the sense of smell. The perception of exceptional odors in the alimentation of early age is certainly obscure, indistinct, or even *nil*. The iodide of sodium or of potassium has been frequently administered to the newborn without concealing the bitter, salty taste, by the use of some agreeable syrup, and without any show of repugnance on the part of the child. Frequently will one see a child of five or six months suck toys which are covered with paints disagreeable to the taste. This is proof incontestable that there is not that acuteness of the sense of taste in these children that there is in older individuals. It is well known that olfactory sensations exert an influence upon the gustatory sensations. The absence in the power of smelling in this instance may have had a favorable influence upon the sense of taste.—*Archiv de Tocol et de Gynécol.*, February, 1891.

CASE OF A FORM OF NYSTAGMUS HITHERTO UNDESCRIPTED.

DR. C. S. FREUND reports a case of nystagmus occurring in a locksmith, nineteen years old. It developed shortly after Whitsuntide, 1889, following a severe day's field-duty in the army. The man awoke in the morning with flickering before both eyes, considerable weakness of vision, with pain "behind" both eyes, and with great oscillation of both eyeballs. This oscillation is said by the patient not to have changed in character since its first occurrence. It consisted of a permanent, extremely rapid, to-and-fro vibration of the eye-ball; it was constantly attended by a feeling of flickering of objects before the eyes; and surrounding objects, corresponding to the oscillation, appeared to move with extreme rapidity; they seemed to whiz to and fro. The patient discovered at the beginning of the disease that the oscillation diminished in intensity if he fixed an object sharply, and

that, moreover, it ceased entirely if he closed one eye, no matter which; it was reproduced immediately if he opened both eyes. Not only the nystagmus ceased upon monocular vision, but also the seeming movements of surrounding objects and the pain behind the eyes. The patient was admitted to the hospital June 27, 1889. The pain behind the eyes lasted about fourteen days after that, and then gradually grew less within six weeks under daily use of mustard paste to the nape of the neck. No change occurred in the other symptoms, though the nystagmus varied in intensity from time to time.

As to vision, the patient from childhood had seen better from the left than the right eye. Three months from the occurrence of the other symptoms, especially since the middle of March, 1889, he had noticed that vision of the right eye was gradually getting worse. The weakness of vision seemed to the patient to be independent of the flickering, as it persisted upon monocular vision. It seems to have persisted without getting better or worse since June 12, 1889. There was never double vision.

At the request of Professor Magnus, Freund examined the nystagmus from a neurological point of view. Both eyeballs were found to move in a horizontal direction, to and fro; they vibrated frequently, and in such small arcs that the rate of vibration could not be counted; it appeared like trembling of the eyes. There was no hippus. Both eyes "trembled" equally. There was intermittent clonic blepharospasm. The vision was: Right eye, hypermetropia 2.5 D.; S. $\frac{20}{CC}$. Left, hypermetropia 3 D.; S. $\frac{20}{XX}$.

Freund reviews the forms of nervous disease in which nystagmus has been found, and concludes that the present case does not belong to any of them.

The galvanic current effected the most striking improvement. The anode was placed on the brow in the eye region, the cathode behind upon the neck, and a current of four milliamperes was allowed to pass for five minutes. Improvement was perceptible at once. Gradually the strength of the current was increased to six milliamperes, and the time lengthened to eight minutes. After seven days' treatment not the slightest indication of the former nystagmus could be discovered. The result remained permanent, with the exception of an insignificant relapse. The subjective disturbances—flickering before the eyes and seeming movements of objects—ceased simultaneously. The trembling of the upper eyelid persisted longest, but disappeared after three weeks of electrical treatment.

There were general clinical symptoms of diagnostic importance. The pulse was arhythmic, dropped a beat, and was accelerated to 100-110 per minute. The first sound over the mitral area was impure. The thyroid gland was enlarged. It was learned that the patient had had a peculiar, profuse, watery diarrhoea, without colic, and that he suffered with increased perspiration, which appeared especially upon the brow and shoulder-blades. This had been noted since 1888.

Freund, therefore, comes to the conclusion that

the nystagmus in the present case was a symptom of Graves's disease. The difficulty in reaching this diagnosis was increased by the fact that Magnus found in the right eye a striking central defect for red, while the left eye had normal color vision, and by the fact that nystagmus, as a symptom of Graves's disease, had been rarely observed before. Bramwell reports a case of nystagmus in which symptoms of Graves's disease occurred. Bramwell suspected disease of the cervical sympathetic.

Nystagmus resembles most the trembling of the limbs, the so called Marie's symptom, which occurs in Graves's disease. As regards the localization of the disease, Freud follows Uhthoff. Clinical experiences and *post-mortem* findings of Nothnagel, Friedreich, Roeckmann, Prévost, and others, show that the region of the brain the lesion of which may cause nystagmus is extensive. The most likely regions are the mid-brain, the corpora quadrigemina, and the medulla oblongata. It is significant that in these regions are found the nuclei of the cranial nerves, and that in Freud's case three or four cerebral nerves were involved.—*Deutsche med. Wochenschrift*, February 19, 1891.

SOCIETY PROCEEDINGS.

[By Telegraph.]

THE AMERICAN MEDICAL ASSOCIATION.

Forty-second Annual Meeting, held at Washington, D. C., May 5, 6, 7, 8, 1891.

THE opening session of the American Medical Association was held in Albaugh's Opera House, on Tuesday morning, May 5th, at 10 o'clock. The Hon. John W. Ross, one of the Commissioners of the District of Columbia, extended to the delegates a hearty welcome to the city.

The Annual Address to the Association was delivered by the President, DR. WM. T. BRIGGS, of Nashville, Tenn.

THE PRESIDENT, after speaking of the high mission of the physician as a scientist and philanthropist, referred to the scientific and practical progress of the day. The science of medicine, he said, had been almost completely revolutionized in our day. In every part of the habitable world blessed with civilization, members of the medical profession were enthusiastically engaged in the work of mitigating disease and prolonging life. Through the brilliant genius of one known as the Father of the Association, this Association had been formed and had grown to its present proportions. He referred to the venerable members of the body, associates of its founder, who, from the first had made annual pilgrimages to this Mecca. Chief among these he mentioned Dr. Nathan Smith Davis—a reference which elicited applause.

Dr. Briggs, continuing, reviewed in general terms the work of the Association, and the great benefits it had conferred on the medical profession. Referring to the code adopted and recognized by the Association, Dr. Briggs said that it would seem that every honorable member of the profession would be willing to abide by this code, but there were some men, men of a high order

of talent, and who are justly distinguished, who have a repugnance to a part of the code and hold themselves aloof from the Association. They undoubtedly had as much pride in the profession as did members of the Association. Could they, however, say that their action was not inspired by some selfish motive?

He referred to the gradual elevation of the standard of education through the influence of the Association. He was ready to maintain that the advantages and facilities for medical and surgical instruction in our institutions were fully equal to those in any other country. These institutions had graduated men who were the peers of any the world had produced. In all the practical branches of medicine, he held, America was in advance. He believed that a majority of the American medical colleges were ready to accede to the demand of the Association for higher education. The success of the Association in these and other directions had been very great. The Association now, he said, occupied an advanced position in the great deliberative bodies of the world. It was full time, he said, that it should take the position of legislating for the whole profession in America. Speaking of those who had alienated themselves from the Association, he said that they should put aside petty differences and show how good it was to dwell together in perfect unity. It was proper, he thought, to pass a resolution, now that so many medical colleges had adopted the advanced course recommended, that no medical man not a graduate from a college that had adopted the approved course, and no professor attached to a college that had not adopted such a course, be admitted as a member or delegate of the Association.

DR. BRIGGS suggested various changes in the routine programme of the Association, and urged that the prize essays contemplated in the formation of the Association would tend to excite interest and encourage study. He believed that medical science would be advanced by the establishment of schools of original research. He thought it might be well to add to the Association a section of original research to encourage members to make or repeat original research. He urged that every effort be made to advance the *Journal* of the Association to the highest point. Next to providing for an ample income, he said, it was important to select an able editor with ample powers. The salary of such an editor, he said, should be \$10,000 or \$15,000, enough to make him pecuniarily independent. In closing, Dr. Briggs expressed the hope that the deliberations of this meeting would carry the profession still further onward in the great road of progress.

DR. CULBERTSON, of Ohio, offered a vote of thanks for the able address, and moved that a committee be appointed by the presiding officer to develop the suggestions made by him. Drs. Hooper, Culbertson, Moyer, Marcy, and Conner were appointed such a committee.

The Trustees of the *Journal* made a preliminary report upon the question of the establishment of a permanent home for the *Journal*. The question having arisen of changing the place of publication to the National Capital, it was resolved to submit the matter to the members of the Association through the columns of the *Journal*. The result of this has been the undoubted choice of Chicago as the place of publication. The con-

troversy has strengthened the *Journal* by increasing its subscriptions and arousing the interest of other subscribers hitherto lukewarm.

DR. ALBERT L. GIHON, Medical Director of the U. S. Navy, presented the following amendment to the Constitution: "That the first day of the general session of this Association shall be the first Wednesday of May or June, the Tuesday preceding being devoted to the registration of members and delegates, the meeting of the standing committees, and the organization of the several Sections." The object of this amendment is to facilitate the work of the Association, to enable all the members to be present on the opening day of the session, that they may be prepared to take part in the business of the meetings, and to give an opportunity to the other National organizations, the organization of the Medical Examining Boards, of the Railroad Surgeons, the American Medical Temperance Association, founded on a line similar to the British Medical Temperance Association, the Association of Medical Editors, the Association of Superintendents of Insane Asylums, etc., to unite with the Association in its labors.

The motion was laid upon the table until the next day.

The Treasurer reported the balance in the treasury, \$9427.21. The statement of accounts will be published in the *Transactions* of the Association.

DR. COMEGYS, of Ohio, offered the following resolution: "That a committee be appointed to consider the question of petitioning Congress to create a Cabinet officer to be known as the Secretary of Public Health, the committee to report on Thursday morning." The motion was carried, and Drs. Comegys, N. S. Davis, and Richardson, of Louisiana, were appointed as the committee.

DR. C. A. L. REED, of Ohio, offered the following:

"Resolved, That the American Medical Association hereby extends a cordial invitation to the medical profession of the Western Hemisphere to assemble in the United States in a Continental American Medical Congress.

"Resolved, That the Committee on Nominations be expressly instructed to nominate one member for each State and Territory, and one each from the Army, Navy, and Marine-Hospital Service, who shall constitute a committee which is hereby instructed to effect a permanent organization of the proposed Continental American Medical Congress, and determine the time and place at which the same shall be held.

"Resolved, That the Committee on Nominations be and is hereby further instructed to report the nominations pursuant to the foregoing resolutions at the general session on Thursday morning."

Carried. Adjourned.

SECTION OF OBSTETRICS AND DISEASES OF WOMEN.

DR. CHARLES A. L. REED, of Cincinnati, delivered the annual address. He limited himself to a few words upon the progress which the department of obstetrics and gynecology had made during the recent past, noting especially the evidences of this progress. As one of these, he regarded the admission of women to the session of the American Medical Association, and another was the growing tendency to specialism. He would suggest that early steps be taken to procure a division of

the section into its two distinct portions, gynecology and obstetrics. The two are not necessarily interdependent, and facts go to show that they are growing more and more apart. He felt that such a division would be conducive of benefit to each section.

The subject of abortion and premature delivery was treated of first by DR. H. D. FRY, of Washington, who spoke on the "Prevention of Puerperal Convulsions by the Induction of Premature Delivery." Albumin in the urine disappears under treatment, as a rule, or remains small in amount, except in a few instances. These exceptions formed the subject of Dr. Fry's paper. The amount of albumin in the urine does not alone indicate the gravity of the case. Severe toxic symptoms may manifest themselves with only a trace of albumin present. Examination of the urine should be made every few weeks. In doing this, the specimen tested should be taken from the whole amount passed in twenty-four hours. The specific gravity should also be taken. When serious symptoms are present, and the treatment is not successful, the induction of labor must be thought of, especially if the child be viable. If the symptoms, however, are very serious, the child must not be taken into consideration. Out of over 800 premature infants, with an average weight of four and a half pounds, 600 and over lived. Viability exists at the sixth month. Dr. Fry reported a case of a primipara of thirty years. While nursing an invalid sister she had taken cold, and when he saw her she was suffering from headache, insomnia, and nausea. She was seven months pregnant. On the second day 21 per cent. of albumin was found in the urine, and hyaline casts were present in large quantity. Hot baths were given the patient, and she was kept in a warm temperature. Her bowels were kept open and diaphoresis was produced. The specific gravity varied from 1026 to 1010, and the albumin from 18 to 31 per cent. by volume. As her condition did not improve, and the urine continued small in amount, induction of labor was suggested. The patient was placed in Sims's position. After cleansing the vagina and cervix with carbolized solution, labor was induced by means of a bougie. The internal os gradually dilated; forceps were applied to hasten the dilatation under the influence of chloroform. The right blade was inserted first, intermittent traction was made until the os dilated, and the child was then delivered. A laceration of the cervix was sustained, which was at once repaired. The child weighed five and a half pounds, and was asphyxiated at first, but recovered under proper treatment. The quantity of urine now increased in amount, and the albumin disappeared. The infant was raised in an incubator until sufficiently strong to be treated in the usual manner. Dr. Fry induced labor at the thirty-fourth week in another case with evidences of toxæmia and with albumin in the urine. The child was healthy; convalescence was rapid. In this case organic disease of the kidney was compatible with health except during gestation. In four other cases reported by him the result justified operative interference. In all, eclampsia was threatened. The insertion of a bougie between the membranes and the intra-uterine wall is the safest way of inducing labor. The bougie should be soaked twenty-four hours in bichloride 1 to 1000, and then washed in warm water before using. The end of the

bougie should be bent at an obtuse angle and then inserted. If this fails, the instrument can be removed and a fresh one inserted. Another method of inducing labor is by the application of alternate hot and cold fomentations to the abdomen.

DR. BEDFORD BROWN, of Alexandria, Virginia, read a paper on "The Practical Treatment of Accidental Abortion," as deduced from 200 or more cases occurring during his practice of forty years. He first gives a hypodermic of one-quarter of a grain of morphine and one-sixtieth of a grain of atropine, and if there is much depression, one-sixtieth of a grain of strychnine and twenty minimis of ergot to produce contraction of the arterial system and stimulate the heart. Antiseptic vaginal douches are given, and then one pint of hot water containing alum, to reduce the haemorrhage. If these measures fail to arrest the progress of the abortion, the patient is placed in the lithotomy position across the bed, a speculum is inserted and iodoform gauze pressed around the cervix, and over this absorbent cotton. A catheter is placed in the cervix. This usually results in the expulsion of the fetus. Should it fail, a conical tampon, covered with cosmoline, is inserted into the os, and allowed to remain there. An enema is also given to induce contractions. Dr. Brown has little or no faith in the use of ergot to arrest the haemorrhage or to expel the placenta. A tampon is necessary for the bleeding. In delivering the placenta he relies on his finger alone. The patient being in the lithotomy position, an assistant forces the uterus down, while the finger is inserted and removes the placenta. If all cannot be removed the patient is chloroformed and the whole hand inserted. Safety, speediness, and completeness are the essential factors in the treatment of these cases. The use of the tampon in retained placenta is neither wise, safe, nor scientific. In collapse following haemorrhage one-eighth of a grain of morphine, one-hundredth of a grain of strychnine and atropine each, and hypodermics of hot water, 110° F., containing small amounts of chloride and bicarbonate of sodium, are given.

Dr. Stanton, of Cincinnati, thought that the cases where induction of labor is necessary are very rare. The condition of the patient and the time of convulsion will indicate the need of action. If labor has already commenced it is wise to hasten the process, if not it is better to wait as long as possible. The fact that albumin is present in the urine is not sufficient reason to justify the induction of labor. Other measures will usually suffice.

Dr. Potter, of Buffalo, emphasized the importance of the early induction of labor in threatened eclampsia. It is not always necessary to wait until there is absolute convulsion. If a uræmic condition is present induction is necessary.

Dr. King, of Washington, urged that induction of labor should not be performed until everything else had failed. He suggested the value of postural treatment, changing the woman from the genupector to Sims's position and back again. Good results have followed this method.

DR. W. W. POTTER, of Buffalo, read a paper on "Joint Reflexes Consecutive to Pelvic Inflammation." He called attention to the multifarious reflexes following pelvic disease, and mentioned specially those which occur about the larger joints of the leg. He said that

an intimate relationship existed between the pelvic organs and the hip-joint, a relationship which is conveyed from the spinal cord through the sacro-sciatic foramen into the joint itself. He illustrated his paper by the case of a woman, twenty-two years of age, who, when six months pregnant, was attacked by what was diagnosed as general peritonitis, from which she recovered. She was delivered at full term with forceps and made a rapid recovery. Some weeks after she suffered with pain in the right hip-joint, which was so severe that she called in a physician. Hip-joint disease was diagnosed and the leg put in a splint and kept there for several months. There was no immobility of the joint nor any shortening of the limb. As a result of this mistaken diagnosis the case was taken to law. The points suggested were the necessity for examining into the condition of the pelvic organs in cases of joint symptoms, and the importance of an early diagnosis, since the treatment depends upon the accuracy of the diagnosis.

DR. LLEWELLYN ELIOT, of Washington, read a paper on "Spasmodic Stricture of the Urethra Following Labor." He regards this as one of the rare accidents complicating labor. It may be extremely painful or painless. It may be entirely spasmodic or symptomatic. The former may be found in connection with injuries of the vagina and rectum and in hysteria. Symptomatic stricture is more frequent, and may occur in any portion of the urethra. In the treatment of this condition iron is needed for anaemia, the bromides for the nervous condition, the iodide of potassium and colchicum for the rheumatic cases. Locally, astringents and caustics are needed, as solution of silver nitrate. If these fail, cystotomy must be performed.

DR. I. S. STONE, of Washington, read a paper on the query, "Can the Gynecologist Aid the Alienist in Institutions for the Insane?" He is strongly of the opinion that the question should be answered in the affirmative. The paper was mainly a compilation of cases which had been reported in the various journals of cures of insanity following operations upon the internal genital organs. Stone believes that many women are now living, confined in asylums, who could be cured by proper surgical procedures. He urged the importance of increasing the staff of medical attendants in the institutions for the insane.

Dr. Eastman, of Indianapolis, reported a case of a woman who suffered from violent neuralgic attacks in the head and who eventually went insane, but who was cured by the removal of a diseased Fallopian tube, followed by a year's careful treatment. The woman is now the head of a public school and in excellent health, both physical and mental.

Dr. Walker, of Indiana, regards many of these cases as true neuroses in which rest alone, without operative treatment, will result in a cure.

Dr. Reed, of Cincinnati, enlarged upon the necessity of increasing the staff of physicians in connection with insane asylums, and suggested the appointment of specialists to visit these institutions and investigate the condition of the pelvic viscera.

Reports of laparotomies were made by Dr. J. H. Bramham, of Baltimore, and Dr. J. H. McIntyre, of St. Louis.

SECTION OF DISEASES OF CHILDREN.

The Section of Diseases of Children met for the first time on Tuesday, May 5th, at 3 P.M., the President, DR. W. PERRY WATSON, of Jersey City, in the chair. The afternoon was devoted to a discussion upon the composition and clinical value of Sterilized Milk.

DR. HENRY KOPLIK, of New York, treated of the bacteriological aspect of the question, and exhibited specimens of cultures made from different preparations of sterilized milk. After reviewing the literature upon the subject, the processes described and practised by Pasteur and Hueppe were narrated. It had been repeatedly shown by different observers that the lactic acid bacterium gains access to milk from without, that it is destroyed by heat, but that a high degree of heat is needed to kill the spores of the bacteria, which multiply after several days and produce a second or alkaline fermentation. Pasteur's method of sterilizing consists in heating milk to 75° Celsius in bulk for half an hour; it is then cooled by passing over ice. Such milk keeps for twenty-four hours, but the process is impracticable. Soxhlet's method, most in use, requires the milk to be boiled in a water bath. The best of all methods is that of Hueppe, by which steam is the active agent. In an ordinary covered tin vessel, twenty minutes is sufficient to sterilize milk by steam; forty-five minutes is ample time for permanent sterilization. Milk will decompose, however, several days after being well steamed, by the action of rod bacilli isolated by Löffler and Koplik. In this process small flocculent clots are formed with characteristic odor, leucin and tyrosin resulting. Milk may be colored by litmus and then subjected to bacterial change when discoloration is observed. The pus coccus turns milk acid, and seems to peptonize it; other poisonous bacilli grow well in milk. After exhibiting and describing cultures of the forms of bacilli which may develop in milk after sterilization, Dr. Koplik formulated the following practical conclusions: That prolonged sterilization by steam is necessary, and that sterilized milk should not be kept for several days, but should be used promptly. The particular form of apparatus or cork is not important. Absorbent cotton is a bad cork, as it mats and leaks; cotton-wool which has been baked is better. He obtained the best results by using digestive ferments (pancreatin, etc.) after sterilizing, not before. He does not feed by weight or age, but in quantities proportionate to the size and vigor of the child. Efforts at securing good milk will be most successful when milk is sterilized at dairies.

Next in order, a summary of a paper by PROF. ALBERT R. LEEDS, of Hoboken, and DR. EDWARD P. DAVIS, of Philadelphia, entitled "The Chemistry and Clinical Value of Sterilized Milk," was read by Dr. Davis.

From a chemical examination of different samples of sterilized milk, Prof. Leeds concludes that sterilization destroys a starch-liquefying ferment normally present in milk. Lactalbumin is partly coagulated, and casein is made less readily digestible by rennet, pepsin, and pancreatin. Butter fat sometimes forms, and the albuminoids in their changed condition hinder the assimilation of fat. Milk sugar is destroyed by long heating.

The process most likely to give good results is to render milk feebly alkaline with lime-water, then treat with

pancreatin at 155° F. for six minutes; if not used at once, raise the milk to boiling for a moment. Dr. Davis's experience in the Philadelphia Hospital and Polyclinic had indicated that while infants fed on sterilized milk and treated by modern methods of intestinal antisepsis were relieved of acute gastro-enteritis or "cholera infantum," yet they were not nourished by sterilized milk; they frequently suffered from obstinate constipation, and their bodies presented after death appearances characteristic of atrophy of the digestive tract. Sterilized milk as *nourishment* was not successful in his hands.

DR. J. LEWIS SMITH, of New York, discussed the papers, emphasizing the many sources of contamination to which milk is open. He narrated Klein's experiment, in which cows inoculated on the shoulder with bacteria, excreted germs in their milk. Milk strained through wine-strainers, exposed to the air of infected rooms, and handled by infected hands, is dangerous. Before the use of sterilized milk among asylum children in New York, 100 per cent, under eight months perished; one child lived two months. A considerable improvement followed the introduction of sterilized milk. He favored sterilization prolonged for two hours.

The subject was viewed from quite a different standpoint by DR. E. N. BRUSH, of Mt. Vernon, who has given much attention to securing proper production of milk. He considered the lactic fermentation normal, and advised "souring" the milk and breaking up the curd. The process secondary to lactic fermentation in which ptomaines are formed is the injurious one. He practises spaying cows to be used for milk; they are kept clean, carefully groomed, and the udders cleansed before milking. Milk is received in a small basin, which overflows into a linen cloth which strains it. Dr. Brush objected to any process which devitalized milk, arguing that young animals need vitalized food. He instanced calves, which have, while fed on mother's milk, large, soft livers, suited for human food; when fed on artificial food, the liver becomes small and hard. Especial importance is laid upon removing sexual excitement and functions from cows giving milk, and numerous examples of abortion and the bad effects of rut were given. Cows excrete through the teats, and milk is unfit for use after the cow has fed on poisonous substances. Cholera infantum increases as grass fails and cows eat noxious herbs. Good milk costs twelve cents to produce. Poor milk, costing five cents, is frequently peptonized at a cost of twenty-five cents per pint!

DR. ADAMS, of Washington, had obtained very happy results from the use of sterilized milk with barley or oatmeal added. Examples of parental prejudice against sterilized milk were given. In transportation, the use of ice was deprecated.

The frequency of fermentation in children's stomachs was explained by DR. SIMON BARUCH, of New York, by the absence of hydrochloric acid, which is a valuable antiseptic. He sterilized forty-five minutes, at 212° F. He had been interested in a recent visit to Escherich's establishment in Germany, where sterilizing in quantity is done.

Interesting corroborative remarks were made by DR. LATIMER, of Baltimore, and DR. BRIGHT, of Toronto.

In the treatment of cholera infantum, DR. SMITH found especial value in withholding milk, sometimes for a week,

and feeding white-of-egg and water, with barley flour which has been subjected to prolonged boiling.

SECTION OF MEDICAL JURISPRUDENCE AND NEUROLOGY.

The subject of the address by the chairman of the Section, DR. T. D. CROTHERS, of Hartford, Conn., was "The Early Psychical Symptoms of Traumatic Brain Injuries." The speaker spoke of the great field open to the investigation of the neurologist, and how, instead of being a specialty in itself, it had reached that point where it must be divided into many special studies. He thinks that much can be expected from the investigations now going on in the almost unknown field of brain physiology. The speaker then spoke of the confusion existing between law and medicine as regard many nervous diseases. Many of the ideas, according to the speaker, embodied in our laws are based upon superstition and error. He considers that medical jurisprudence must depend upon scientific understanding. He then spoke of the difficulty of an early diagnosis in many of the diseases of the nervous system. As an instance, he spoke of the uncertainty of a diagnosis in general paralysis of the insane, even after many of the symptoms were quite marked. The friends and family of a patient suffering with this disease first notice that there is an alteration in his character, but pay no special attention to it until there is a sudden development of some marked peculiarity or reckless conduct, when the family physician is called in, who in many cases explains the change of character on some moral basis. Many serious blunders in diagnosis are made during this period. If the condition is diagnosed early, great subsequent trouble may be avoided.

The speaker then spoke of the alcohol, opium, and other habits. He said that they were usually considered as due to the habit into which the patient had fallen. He divided these conditions into two classes; first, those with a history of traumatism, such as sunstroke, blows on the head, etc. These cases, after recovery, often take to the use of alcohol, or opium, and go downward into the worst inebriety, and later insanity, while others are carried off before they become insane by some intercurrent disease, like pneumonia. The second class of cases he refers to "psychical traumatism." The patient is suddenly overwhelmed by great grief, business reverses, etc., after which his entire character is changed, and the drink habit is developed. Alcohol is first taken as a medicine, followed later by confirmed alcoholism. In these cases the patient is treated as a common drunkard, is despised by his associates, and is an outcast in society.

The drink habit is in many cases the symptom of grave cerebral trouble, and should receive prompt attention. Often the drunkard is confined in jail, and during his confinement acute mania or melancholia develops. In many of these cases the alcoholic habit is the symptom of the approaching disease.

The neurologist must point out the road for the family physician, who must be able to study his cases closely, as it is during this stage of the disease while the patient is under the care of the family physician that benefit from treatment can be expected. The heredity of the

patient, his early life and surroundings, must be closely studied. Dr. Crothers believes the time will come when the inebriate will be protected and cared for as thoroughly as the subject of insanity.

The subject of the next paper on the programme was "Status Epilepticus," by GROSVENOR R. TROWBRIDGE and CHARLES B. MAYBERRY, of Danville, Pa. The writers of this paper gave a very interesting description of this disease. They described twenty cases which had come under their observation, from which they draw the following conclusions: First, there is no demonstrable cause for this disease; second, the convulsion is always followed by coma; third, there is no post-mortem lesion that is characteristic of this disease; fourth, the unfavorable prognosis of these cases, and lastly, it must be treated symptomatically. The treatment must meet two indications, first, the attack itself; second, the exhaustion following the attack during the stupor.

The use of chloroform and ether to control the attack is temporary; they only stop the convolution while the patient is completely under their influence. Ether is the preferable drug, as it does not depress the heart or respiration.

They have administered chloral by enema in thirty-grain doses, often repeated in some cases, without effect. They think it might be used with advantage hypodermically, but have never administered it in that way. Bromide of potassium is useless in these cases on account of its slow action. Nitrite of amyl is also of little value to control the convulsions. Hypodermic injections of morphine have succeeded in some cases, while in several others it has been found valueless. Atropine is useful in so far as it stimulates the heart and respiration. The use of hyoscine promises good results, as it has acted well in a number of their cases. It does not end the attack, but induces sleep, during which the patient is free from the convolution. Salicylate of physostigmine has been tried, but has been found valueless.

Conin has given the best results of any drug that they have employed. The effects of one-hundredth of a grain are as follows: Decrease of the convolution, commencing first in the lower extremities and gradually extending upward, followed by ptosis and slowing of the heart and respiration, and later sleep, which lasts several hours. As soon as the patient awakens the convolution returns. It usually acts best in combination with morphine. In four of these cases this treatment was of no benefit, but in several other cases it was used very successfully.

It is usually useless to attempt medication by the mouth. If drugs or food are given, they should be introduced through a stomach-tube. Whiskey, atropine, milk, nourishing broths, etc., should be given to stimulate and sustain the strength of the patient.

In discussion, Dr. Hughes, of St. Louis, spoke of the use of chloral during the attack, and disagreed with Dr. Trowbridge in regard to its value. He says the reason why it does not succeed in many cases is because it is used too timidly. A profound impression must be made upon the vasomotor system. His rule is to give eighty grains of chloral hydrate by the rectum at one dose, and in the majority of cases this treatment is successful.

Dr. I. N. Quinby, of Jersey City, N. J., administers large doses of calomel and swift purgatives, with the view

of removing the serous effusion in the brain, after which anodynes are given.

The next paper was by DR. IRVING C. ROSS, of Washington, D. C., entitled "The Neuroses from a Demographic Point of View." The observations of Dr. Ross in many countries showed that certain races were peculiarly subject to certain neuroses, while other races were almost free from a given nervous affection.

In discussion, Dr. Osler, of Baltimore, spoke of the freedom of the negro race from chorea and locomotor ataxia. He has found that hysteria is not an infrequent disease among this race.

Dr. Ross, in reply, said that the observation of Dr. Osler as regards locomotor ataxia had not been borne out in his experience, as he had seen two typical cases of locomotor ataxia occurring in negroes within the last year.

DR. HUGHES, of St. Louis, spoke of the increase in insanity in the negro race since the war.

This discussion was followed by a paper on "The Functional Degeneracy of the Brain," by DR. J. T. SEARCY, of Tuscaloosa, Ala. He claims that the brain-power of an individual depends upon heredity and the constant exercise of the cerebral function. Idleness of the brain is followed by degeneration, just as muscular degeneration follows inactivity of the muscles. The two extremes in the social scale, the wealthy man and the very poor, are most subject to degeneration of the brain, while the middle classes furnish examples of the highest cerebral development. Next to idleness he places alcoholism as the most potent agent in the causation of cerebral degeneration. Long use of alcohol begets such impairment of the brain function that complete recovery rarely ever follows. The brain of the inebriate is usually weak to start with, and quickly degenerates after the use of alcohol is commenced.

The next paper was entitled, "A Description of the Newly-discovered Virile (Penile) Reflex," by DR. C. H. HUGHES, of St. Louis. The discovery of this new reflex has been made by Dr. Hughes within the last year. The description of this reflex is as follows: A healthy individual whose genito-spinal centre is entirely normal is placed in the supine position, and the sheath of the penis made tense by clasping the foreskin with the left index finger and thumb and pulling it firmly toward the umbilicus, placing the finger low down upon the dorsum of the penis for perceptive purposes. On then sharply percussing the dorsum of the penis, near the perineal extremity, a retraction of the bulbo-cavernous portion will be felt. The full value of this reflex is yet to be determined.

DR. JOHN MORRIS, of Baltimore, Md., gave an extract from his paper entitled, "What Can be Done for Over-taxed Brain-workers to Prevent Inebriety?"

DR. L. N. QUINBY, of Jersey City, also gave an extract of his paper on "The Therapeutic Action of Alcohol."

SECTION OF SURGERY AND ANATOMY.

The Section was opened by the address of the chairman, THEODORE A. McGRAW, M.D., of Detroit, upon "The Use of the Elastic Ligature in the Surgery of the Intestines."

After paying a glowing tribute to the impetus given to

abdominal surgery by Senn, and particularly to the ingenuity and skill of this eminent surgeon in devising a new method of intestinal anastomosis, McGraw briefly indicated the now well-known conditions requiring the performance of this operation. Rapidity is here, as in all cases of abdominal work, of cardinal importance. The old method of suture requires half an hour, Senn's method consumes from fifteen to twenty minutes, but a still further saving of time is desirable. One of the greatest dangers of any method requiring incision into the bowel is the escape of feces into the abdominal cavity; hemorrhage, too, is always a possible grave complication in all cutting operations.

With the idea of devising a method which should consume the minimum of time and which should be free from the risks necessarily dependent upon incision, McGraw first experimented with metal plates so designed that they should clamp together two bowel segments and subsequently form an opening between them by pressure necrosis. This method was, however, abandoned in favor of the elastic ligature.

The rubber ligature was previously used in Von Bergmann's clinic. Here the method consisted in constricting the approximated portions of two bowel segments by means of several rubber ligatures arranged in successive loops. The author was not aware of this work before his own investigations were inaugurated. By repeated trial he found that thin rubber cord, 2 mm. in diameter, was the best material to use. It is smooth, elastic and tenacious. By shaving one end thin it can be threaded upon an ordinary worsted needle. By stretching the rubber cord as the needle draws it through the walls of the bowel a small opening is made which is completely filled and even slightly stretched by the increased thickness of the rubber incident to the release from tension. The loops of intestine between which an anastomosis is to be made are stretched together in a straight line by means of the ordinary Lembert suture; close beside this row of sutures the rubber ligature is carried in the long axis of the bowel, including from an inch to an inch and a half of its walls; the needle is then carried through the coats of the other segment for the same distance in its long axis and out again, leaving two free ends, which are then drawn taut and firmly secured by means of a fine silk ligature. Thus the walls of the two bowel segments are puckered in the elastic ligature and firmly apposed to each other. Another row of Lembert sutures is now so placed that the ends of the ligature and the seat of approximation are completely enclosed in the peripheral lines of sewing.

In experimental work obstruction occurred at times from a too acute bending of the bowel. The puckering, however, occasioned no inconvenience, nor did the strangulation incident to the ligature produce pain, either in animals or in the human subject.

In all animals with antiseptic wounds recovery was prompt. In not a single instance did the ligature allow of faecal extravasation.

After twenty-four hours there was adhesion of the adjacent surfaces and partial obliteration of the folds, occasioned by tightening the ligature. After forty-eight hours the folds were entirely obliterated and the rubber was observed to be cutting through. In seventy-two hours there was a small space on either side of the ligature.

ture through which water readily passed from one bowel segment to the other. At the end of the fourth day the ligature had disappeared and the anastomosis was complete, leaving free, smooth edges, with just enough plastic lymph to glue together the apposed surfaces. In all, thirty-nine dogs were employed, and in addition the method was proven to be practically valuable as applied to man in one case.

In this case the man had been a sufferer from cancer of the pylorus for three years. For three months he could retain practically no food. The temperature ranged about 100° F. On examination a fixed tumor was found. The stomach was washed out for several days with a soda-boric-acid solution. An incision was made over the stomach, beginning in the middle line and running transversely to the left. A cancer of the pylorus was found so firmly fixed that removal was out of the question. As the duodenum or jejunum could not readily be found the highest coil of small intestine was stitched to the stomach wall by a line of Lembert sutures, and the rubber ligature was made to include one and two-fifths inches of both the intestinal and stomach wall. A final row of Lembert sutures was then applied, and the external wound was closed. After exposure of the stomach the operation consumed just eleven minutes; the greater part of this time was wasted in endeavoring to pass a needle through the ends of the rubber ligature to secure them from slipping. Since ligation has been proven safely to accomplish this purpose a subsequent operation would require even less time. In dogs the whole operation can be done in three minutes.

The patient vomited once on the third day. On the fourth day the food that was taken was not regurgitated, hence it is probable that the passage from the stomach to the bowel was open at that time.

The patient suffered for two weeks from constant diarrhoea, and died at the end of that time from exhaustion.

A post-mortem examination showed that the case had run a typical aseptic course. A loop of the small intestine three feet from the ileo-caecal valve was found firmly adherent to the stomach wall. The elastic ligature had disappeared, and there was an opening from the stomach to the gut slightly obstructed by a bridge of mucous membrane, which was caused by passing the needle too obliquely through the thick gastric wall, which had not been included in the constricting band. The application of this operation is necessarily limited by the fact that the continuity of the intestinal tract is not immediately restored. Thus, in internal strangulation, volvulus, or intussusception another method will be needed. Here Senn's plates will be found useful. In partial stenosis, however, as in cases of pyloric cancer or stricture, anastomosis by the elastic ligature is safer, quicker, and more efficient than any other measure yet proposed.

In ileo-colostomy, particularly, this latest method of anastomosis promises well, since here the danger incident to tearing out of sutures and consequent faecal extravasation is especially great.

In gangrenous hernia the formation of an artificial anus may be anticipated by the application of the elastic ligature. Helfrich has already, in two such cases, made

a lateral anastomosis by incision and stitching, with success in one instance. Here, on the ninth day after the anastomosis was formed, the gangrenous gut was excised and the healthy ends were turned in and stitched. The method by elastic ligature would, in these cases, be far more safe than is that of incision and suture.

Existing faecal fistula or false anus is also amenable to the application of the elastic ligature; it may be employed to divide the projecting skin, or if this is not practicable, a formal operation may be undertaken, and by its aid the continuity of the intestinal canal may be restored. By this method McGraw endeavored to establish an opening between the gall-bladder and the intestine, but in this he was not successful, his results according with those of other experimenters. There was a tendency for the bile to escape beside the ligature into the peritoneal cavity. Of nine dogs experimented upon, six died. In two of the three survivors the ligature had disappeared, and the orifice was completely closed; in the third the ligature was still in place. There was still an opening between the gut and the gall-bladder, but it was very much smaller than the original amount of included tissue.

Following Dr. McGraw, Dr. T. G. MORTON, of Philadelphia, read a paper upon "Appendicitis and Pericecal Inflammations, with Notes of Cases Illustrating Special Difficulty in Diagnosis." In this long paper nothing new was advanced. The author strongly urged early operation, operation in the intervals of recurrent attacks, and, in acute cases, excision of the appendix, followed by invagination and suture.

DR. HENRY O. MARCY, of Boston, followed with a classical paper upon "The Scientific Rationale of Modern Wound Treatment." In his remarks he quoted largely from the "Discussion upon Antiseptics," between Tait and J. William White, declaring in strong terms against the illogical and irrational arguments of the great English opponent of Listerism in its modern developments.

DR. CHRISTIAN FENGER, of Chicago, followed by a paper and illustrations of "A New Operation for Hernia." He strongly advised close suture of the mucous surfaces first; next, the placing of a certain number of tension sutures; finally, the insertion of the coaptation threads. His incision is so planned that no tissue is sacrificed.

The meeting was closed by a discussion of "Some Points in the Surgical Treatment for the Radical Cure of Hernia," by DR. AUGUSTUS P. CLARKE, of Cambridge, Mass. The author strongly insists upon antisepsis, incision of the sac and ligature at the internal ring, the restoration of the obliquity of the inguinal canal, and, finally, closure of the wound without drainage.

SECTION OF PRACTICE OF MEDICINE AND PHYSIOLOGY.

The proceedings of the Section were opened by the address of the chairman, DR. V. C. VAUGHAN, of Michigan, on the subject of "The Growing Importance of Chemical Studies in Medical Education and in Medical Research."

The speaker began by an exhaustive description of our present knowledge of the physiological and patho-

logical chemistry of cells, and then went on to a consideration of the chemical changes of many substances in the body in health and disease. A succinct, but thorough, account of recent researches in uremia was then given, indicating the desirability of investigations in the synthesis of urea and the relations of creatine, creatinine, and the poisonous methyl-guanidin. Among the writer's conclusions having direct practical bearings are the following: That the substances which produce uremia are not present in normal urine; that the poisonous effects of vitiated air are not due to substances existing in the air, but formed from the altered chemistry of the body; that albumins are often absorbed without being changed into peptones. As might have been expected, the paper gave a full account of our present knowledge of the subject, and suggested many lines on which future investigations may be made with distinct advantage to practical medicine and therapeutics.

DR. J. P. CONNELLY, of Williamsport, Pa., read an interesting account of a case of "Fatty Urine Accompanying an Abscess in the Right Iliac Fossa, with Recovery." The fat appeared in the urine before general or local symptoms of the abscess were present. After fat passing for eight days, a large amount of pus was suddenly discharged, when the fat suddenly and entirely disappeared. While the fat was passing the urine was clear, without sediment; color, amber; reaction, acid; specific gravity, 1020; no albumin; no sugar. In the warm urine the fat floated on the surface, resembling castor or olive oil. It rapidly solidified on cooling, to the consistency of beef tallow, and was of a yellowish-white color. The amount of urine passed in twenty-four hours was twenty-four fluidounces. In this the fat, when collected, measured four and a half fluidounces, and weighed three and a half ounces avoirdupois. No cod-liver or other oil had been taken; there was no suspicion of deception. The blood was frequently examined for filaria, with negative results.

Dr. Connelly looked on the passage of the fat as a pressure symptom.

DR. J. W. CARHART, of Texas, read a paper on the "Use of Digitalis in the First and Second Stages of Pneumonia," strongly deprecating such use, and recommending rather veratrum viride, morphine, and atropine, or venesection.

DR. S. K. JACKSON, of Norfolk, Va., read a paper on "Tuberculin: Its Value as a Discovery, Apart from Its Therapeutic Importance, together with a Consideration of the Most Rational Mode of Employing the Principle Involved in It."

DR. H. D. GEDDINGS, of the Marine-Hospital Service, read part of a very exhaustive report on the "Use of Tuberculin in Twelve Cases of Tuberculosis and One of Lupus." The writer's conclusions were very conservative, showing the remedy to be of value only in a small proportion of cases.

DR. GEO. E. FELL, of Buffalo, read a report on "Two Additional Instructive Cases of Forced Respiration," and gave a demonstration of his apparatus, which elicited some discussion.

DR. ASA F. PATTEN, of Boston, read an exhaustive paper on the "Pathology and Treatment of Phthisis," eschewing the idea of its microbic origin, and giving various methods, hygienic and medicinal, for combating it.

SECOND DAY—GENERAL SESSION.

The general meeting of the Association was held in the Opera House, at 10.30 A.M., DR. WILLIAM T. BRIGGS, the President, in the chair.

The address on General Medicine was by DR. E. L. SHURLY, of Detroit, Mich.: "The Relations of Micro-organisms and Toxæmia to the So-called Zymotic Diseases." He confined himself to a generalization of the pathologica and chemical features of the subject. He laid stress at the outset of the address upon the importance of bearing in mind the fact that the organized human body is under the influences of the forces of nature—ether, energy, and matter—with the addition of the vital force, and that the only difference between life and death consisted in a different arrangement of the molecular elements. The changes which are continually going on in the human body give rise to a vast array of physiological and pathological products, some of the latter being so noxious as to rapidly destroy life. Proteids, peptones, and ptomaines are all formed in this manner, and over forty of the latter, all more or less noxious, have been discovered. These, once formed, are received into the system and produce a general toxæmia which is characteristic of the disease which they represent. These diseases, therefore, are in reality blood diseases, due to an altered pathological condition of the blood. Many of these poisonous substances, however, are rapidly destroyed in the blood before they are able to produce any depression of the system. Others maintain their noxious property. Absorption of ptomaines from the intestinal canal may account for many of the so-called malarial diseases, the proof of which may be found in the rapid relief following the administration of brisk cathartics. Chemists and pathologists have discovered that diphtheria, tubercle, and other diseases, including gonorrhœa and syphilis, give rise to the formation of a ptomaine, which is itself the cause of the diseased condition, or toxæmia, rather than the original trouble itself. In addition, the development of the microscope has revealed the presence of immense numbers of bacilli and micrococci in the atmosphere, which play an interesting part in the production of disease. Most of the species of these bacilli are destroyed by the tissues of the body; others are destroyed by healthy tissues, but find a favorable nidus or soil in unhealthy tissues. It is probable that pathogenic bacilli never develop except when some previous disease has brought the body into the proper condition necessary for such development. This development then occurs by catalytic action.

After merely touching upon the subject of immunity and susceptibility, Dr. Shurly turned to the practical consideration of the therapeutic action which appears to be indicated by the facts obtained. He said that the main therapeutic indication is: antagonism of the action of the ptomaines and microbes within the body. Such drugs must be administered as have been found in the laboratory to be detrimental or destructive to the existence of these poisons. Thus, chlorine, iodine, the chloride of gold combined with glycerin and sodium chloride, have been found by Drs. Gibbs and Shurly to antagonize successfully the action of tubercle bacilli within the body. Hypodermic medication seems to be better adapted to the

successful treatment of these various conditions, as it appears to act more directly upon the diseased cells. Thus, Lauder Brunton recommends injections of balsam of Peru in phthisis; the bromide of gold, one-quarter to one-half of a grain, hypodermically, is lauded in the treatment of epilepsy as more valuable than the employment of the bromides in the usual manner. Dr. Shurly believes that animal poisons can be neutralized in the blood, and that this assumption will be shortly demonstrated. A sort of isomerism or antagonism exists between animal and chemical poisons, as proven in the laboratory, and this fact may be productive of tremendous progress in the therapeutic management of these cases.

Dr. A. L. Gibon's proposed amendment to the Constitution became the matter of business at 11.30. His object in presenting the amendment was to dispose of all preliminary work before the meeting of the general session. Dr. X. C. Scott, of Ohio, regarded the resolution as one which would make the American Medical Association the tail-end of all other societies, and, therefore, moved that the matter be laid on the table. Dr. N. S. Davis, of Illinois, said that the so-called Constitutional amendment was in reality not such, but merely an amendment of the By-laws. Dr. Scott's motion was then carried.

Dr. Scott's amendment to abolish the Committee on State Medicine, on the ground that the Section on State Medicine covered the work, was carried.

The motion of Dr. E. A. Wood, of Pennsylvania, that the word "Physiology" be stricken from Section I., and a new section entitled the "Section on Dietetics and Physiology" be formed, was carried.

Dr. J. C. Culbertson, of Ohio, moved that the State and geographical district societies in affiliation at this time with this Association, having a membership of one hundred or more, shall be recognized as branches of the American Medical Association. Dr. Davis moved that the proposed amendment be referred to a committee of five to be appointed by the President, and that the said committee shall confer with the State and other societies upon the desirability of such a change, and to report at the next annual meeting of the Association. Carried.

Dr. William H. Daly, of Pennsylvania, moved that in the future the permanent members have all the rights of delegates. On motion of Dr. Davis, the motion was laid on the table.

A communication was received from the State Medical Association of West Virginia, protesting against the infringement of the rights of practitioners by the laws governing the railroad surgeons. The matter was referred to a committee to consist of one from each State medical society.

SECTION OF PRACTICE OF MEDICINE AND PHYSIOLOGY.

DR. J. W. SMALL, of New York, read a paper on "The Treatment of the First Stage of Pneumonia." The treatment recommended was based on the idea of local congestion and inflammation. The author stated that in several hundred cases, in which the method was used before the second stage, the disease was arrested within twenty-four or forty-eight hours. The treatment consists in the application of external heat and friction to the extremities, hot poultices to the chest, Dover's

powder and nitrate of potassium. Sometimes a single dose of 15 grains of antipyrine was given.

Dr. Goodall, of Vermont, said he had used veratrum for many years, and considered it preferable to the newer remedies. His method was to give three drops of a reliable fluid extract every three hours. This sometimes produces nausea, and at times copious bilious vomiting, but usually reduces the pulse to normal within twenty-four hours.

DR. J. W. SMALL, of New York, read a paper on the "Therapeutic Action of Tonica Water, an Alkaline Chalybeate Water from a Spring at Highland Park, Conn."

Under the title of "Some of the Remote Effects of Injury to the Brain in Delivery," DR. F. W. GOODALL, of Vermont, attempted to prove the cause of right-handedness to be some injury to the motor centres of the brain on the right side, owing to the peculiarities of the majority of presentations. Exceptional cases of right-handedness with other presentations the author referred to heredity.

The writer's conclusions were criticised from various standpoints by Drs. Eccles, Putnam, Aulde, and Cronyn.

DR. J. LEWIS SMITH, of New York, gave extracts from a paper on "Recent Contributions to the Knowledge of Diphtheria."

After a review of the wide distribution of the disease, and its high death-rate, the author considered the question of etiology, which he considered settled, the cause being the bacillus of Klebs and Löffler.

The appearance and characteristics of this organism and of the ptomaine produced by it were described, and the part played by each in the causation of the anatomical changes and symptoms detailed. Dr. Smith then considered the so-called pseudo-diphtheria, which he held to be caused by other organisms than the Klebs-Löffler bacillus, and which, though the membrane and many symptoms were similar, differed from true diphtheria in certain important particulars. The diphtheria complicating scarlet fever was one of the pseudo variety.

The writer then took up the question of the mode of contagion, giving instances proving the great vitality of the pathogenic germs.

With regard to diagnosis, Dr. Smith holds that an exact diagnosis can be made, provided the Klebs-Löffler bacillus can be demonstrated.

Dr. Eccles, of Brooklyn, thought that the writer had gone too far in claiming so much for the Klebs-Löffler bacillus, and referred to the work of Dr. Vaughn, which indicated the possibility of a number of organisms being able to produce similar effects.

Dr. Osler agreed with the writer, and said he had recently had two cases in his wards in which Dr. Welch had demonstrated the presence of the bacilli. He thought the vexed question of the relation of croup and diphtheria would be settled by such investigations as soon as typical cases of croup presented themselves.

The Chairman briefly reported his experience in three epidemics of diphtheria. In the first and second he had no difficulty in demonstrating the Klebs-Löffler bacillus. In the third, with a death-rate of 50 per cent., with no paralysis, most of the deaths being from suppression of urine, the bacilli were absent. He held, therefore, that we must be careful in the use of the term pseudo-diph-

theria, so as not to give the impression that it is a non-dangerous and non-contagious disease.

Dr. Early, of Pennsylvania, attributed the origin of diphtheria to dampness and mould.

Dr. Smith, in conclusion, remarked that the difficulty in the diagnosis was similar to that in many others, and that of the pseudo-diphtheria probably various forms would be determined. He thought the general practitioner should be able to examine for the bacillus.

DR. JAMES J. PUTNAM, of Boston, read a paper on "The Character of the Evidence respecting Arsenic as a Domestic Poisoning," giving the results of his extensive investigations.

Dr. Wolf, of Philadelphia, confirmed the statements made as to the frequency of occurrence of arsenic in the urine, but did not look on the arsenic in such cases as being a source of danger to the individual.

Dr. Osler thought there must be some difference in the conditions of various observers. He had never seen the cases of neuritis as described by the writer. He had given arsenic many times in large doses, but never with bad results.

DR. L. WOLF read a paper on "The Use of Naphthalin in Typhoid Fever," based on one hundred cases, which was discussed in connection with a paper by DR. B. M. GRIFFITH, of Springfield, Ill., on "Antiseptic Treatment and Liquid Diet in Typhoid Fever."

Dr. Osler said he had found that naphthalin did no harm and was valuable for that reason. It certainly controls diarrhoea, not only in typhoid fever, but in other diseases. It must be given in large doses. He recalled the treatment of Nathan Smith, which was purely symptomatic, making free use of fresh ale, diet, cold water, and not too much medicine.

Dr. Levick, of Philadelphia, thought much medication a mistake. His advice was to wait. He especially opposed the use of digitalis in fevers.

Dr. Kramer, of Cincinnati, questioned the rationale of using antiseptics in such cases.

Dr. Cronyn, of Buffalo, recalled the theory of King-Chambers that the condition of the blood in typhoid fever is one of super-alkalinity. He had acted on that theory for many years, using hydrochloric acid, and with great advantage.

Dr. Wolf closed the discussion. He said he could not reply to the theoretical objections to the use of antiseptics; the results could not be questioned. He described the great improvement in the treatment of typhoid fever by the German method of cold baths.

SECTION OF OBSTETRICS AND DISEASES OF WOMEN.

The Section of Obstetrics and Diseases of Women met for the second time on the afternoon of May 6th. Two subjects of very general interest had been chosen, "The Forceps," and "The Causes and Treatment of Uterine Displacements." New forceps were shown by Drs. L. E. Neale, of Baltimore, and McGillicuddy, of New York. Dr. Neale's instrument is an axis-traction forceps with metal traction bar, possessing very considerable compressing power; its cost is almost that of Tarnier's. Dr. McGillicuddy had modelled a forceps much resembling that invented by Hubert, with the difference that in the former the traction handles are detachable from the outer end of the handles, while in the old for-

ceps there was no such separation, but axis-traction was effected by a sharp angle in the handles. The blades were those of Simpson in the cephalic portion and lock. He also showed an anti-craniotomy forceps which lessens the size of the foetal head by compressing the upper, non-vital segment of the cranium, thus avoiding the medulla. A class of cases in which the forceps is positively indicated was described by Dr. A. P. Clarke, of Cambridge. Such are cases where the head is engaged at the brim, but uterine action fails; also occipito-posterior position under similar circumstances. When the head is movable above the brim it must be pressed down and steadied by an assistant until the forceps can be applied. Resistance of the soft parts contra-indicates forceps and calls for narcotics or anodynes followed by oxytoxics. In oblique situations of the head the forceps guides rather than forcibly rotates the head. The long forceps, of greater than usual length, is required, and is preferred by Dr. Clarke to version.

The discussion of these papers elicited the comparative cost of the various instruments, Dr. McGillicuddy's being made for five dollars, while Dr. Neale's costs eighteen dollars.

Axis-traction by tapes was commended, and forcible rotation and compression of the head were deprecated.

A very interesting and well-illustrated paper was that of DR. J. W. KELLOGG, of Battle Creek, Mich., which embodied the results of the examination of large numbers of healthy and ailing women to determine the relation between dislocation of the abdominal viscera and pelvic disease. It was observed that the so-called feminine type of respiration depended entirely on the presence of the corset and tight clothing, there being no difference between the breathing of normal men and women. The modern woman is deformed, however, by a vicious dress and lack of exercise, which result in morbid conditions of the abdominal viscera and pelvic disease. In the modern woman the relation of the waist measurement to the height is but 33 to 100, while in the Greek statue 43 to 47 to 100 is found. The abdominal viscera are readily displaced, the uterus yielding far less easily to pressure.

Headaches and neuralgias were observed to be reflexes from disordered abdominal surfaces, whose perverted function result in toxæmia. The prophylactic treatment advised was a reform in dress and calisthenic and gymnastic training. In regard to the treatment of uterine displacements when they become pathological, Dr. W. J. Asdale, of Pittsburg, described four interesting cases, two of prolapse and two of retroflexion, which he successfully treated by ventro-fixation (laparo-hysterorrhaphy). In two cases the appendages were removed. The patient had been under observation for two years after operation, and cure seemed to have resulted. In no case had pregnancy supervened.

An additional case of ventro-fixation by a single suture passing through the anterior uterine wall was reported by Dr. W. P. Chunn, of Baltimore. The appendages were removed, and, as the patient collapsed, time was taken to pass but one suture through the uterus; a cure of the displacement followed.

Dr. Asdale had employed two or more sutures in his cases. An illustration of the failure of classic symptoms in a case of displacement was narrated by a woman physician, Dr. Carpenter, of Cincinnati. Extreme ante-

flexion with small os and long cervix existed in the patient without symptoms, save neuralgia in one lower extremity. Pregnancy ending in a tedious instrumental labor cured the neuralgia and corrected the uterine condition. The vexed question of the value of pessaries in treating displacements was warmly argued. The majority favored the carefully-fitted hard pessary used for a short time as a palliative splint, or the tampon of antisepcticized wool. Pessaries, however, were of very limited value and rarely effected a cure.

The question of pregnancy with ventro-fixation was raised, and recently reported cases showed that a considerable proportion went to term, while some aborted, and in one case difficult labor from atrophy of the anterior uterine wall resulted.

Dr. Howard A. Kelly, of Baltimore, stated that in his investigations he used small, carefully fitted pessaries to relieve pain caused by adhesions. He rarely continued such use for more than a short time. Ventro-fixation was a resort only when other means failed. He performed it by attaching the utero-sacral ligaments to the abdominal wall, thus not interfering with the body of the uterus.

Dr. Kellogg had succeeded in many cases by shortening the round ligaments.

The following officers were elected by the Section for the ensuing year:

President, Dr. E. E. Montgomery, of Philadelphia, Pa.
Vice-President, Dr. Bedford Brown, of Virginia.

Secretary, Dr. F. H. Martin, of Illinois.

SECTION OF NEUROLOGY AND MEDICAL JURISPRUDENCE.

The first thing on the programme was the election of officers for the ensuing year, which resulted as follows:

President, Dr. Harold N. Moyer, of Chicago.

Secretary, Dr. Grosvenor R. Trowbridge, of Danville, Pa.

Assistant Chairman, Dr. J. E. Emerson, of Detroit.

The first paper was read by Dr. B. A. WATSON, of Jersey City, N. J., on "The Diagnosis of Traumatic Lesions in the Cerebro-spinal Axis and the Detection of Malingering Referred to this Centre." This was a very interesting paper, as the speaker had conducted a series of experiments upon dogs to ascertain the lesions and pathological changes produced by concussion of the spine. In concussion he has found that the vibratory force is not only expended upon the spinal cord itself, but also upon the surrounding soft parts and adjoining organs. All tissues do not transmit the vibratory force equally well. In some tissues there can be little or no vibratory force produced, while a comparatively slight blow produces considerable vibratory force on other tissues.

He gave as an example the transmission of force applied to the nates, caused by a blow or fall, up the spinal cord to the brain. The smaller the area to which the traumatism is applied the greater the concussion. The same force distributed over a wider area produces much less concussion. He claims that concussion of the spinal cord cannot be produced by blows on the anterior part of the body, as a force sufficient to do this will cause instant death, because of the injury to the intervening

viscera. According to his researches, the force of an electric shock produces the same lesion as any other traumatism. Concussion, according to the speaker, is a condition of nervous and circulatory excitation.

Rapidly-repeated slight blows produce concussion in the same manner as a heavy blow applied at one time. This has been demonstrated upon animals. The same laws hold good in cerebral concussion as in spinal concussion. The difference in symptoms is simply due to the difference in the function of these two organs. He spoke of how many writers considered haematuria as a symptom of spinal concussion, but, according to his observation, this was not nearly always true; it is rather due to concussion of the kidney than the spinal cord.

Concussion always produces either functional excitation or depression. In some cases the depression is due to organic lesions. The sudden development of symptoms after the reception of an injury always point to a grave lesion. The symptoms of disease of the cord come on slowly, while the symptoms of concussion are always sudden in their onset. There are always symptoms of paralysis in concussion, often both motor and sensory, but especially the former. The speaker then described a series of experiments which he had performed on dogs. In all of his experiments paraplegia occurred; it followed immediately after the traumatism. In those dogs in which there was complete paraplegia, there was never any improvement in the paralyzed parts. In some of the cases where there was incomplete paraplegia, there was slight improvement after a few days.

The speaker said that it was unfortunate for science that such a large class of conditions are classed under the head of concussion. Many of these conditions have wholly different causes and symptoms, and should be placed in separate classifications. He said that so long as the present classification was retained error must result. He spoke of how the term railroad spine was used to cover many different conditions. He classified the results of concussion under three heads: first, injury to soft parts surrounding the spinal column; second, injuries directly to the spinal column; and, thirdly, injuries to the cord and its membranes. In his experiments upon animals, the speaker has invariably found post-mortem lesions.

Out of fifty dogs experimented upon, thirty-three showed distinct symptoms of concussion during life, while seventeen did not show these symptoms, but in all of the cases post-mortem lesions were demonstrable. In no case was there a failure to find distinct evidences of concussion after the death of the animal. He believes that the vasomotor system plays an important part in concussion. According to the speaker, in the majority of instances a diagnosis is not difficult to make. In the differential diagnosis between the symptoms assumed by the malingering and the true cases of concussion a careful history of the case should be obtained. In all cases a systematic methodical examination must be made.

In conclusion, he said that no physician should go upon a witness-stand and swear that there had been concussion of the spinal cord unless the symptoms of this condition appeared soon after the receipt of the injury. In all cases a very careful examination must be made.

DR. THOMAS H. MANLEY, of New York, next read a

paper on "The Consideration of Traumatic Lesions of the Spine Resulting from Railroad and Other Injuries; Their Immediate and Remote Results, Etiology, Pathology, and Diagnosis." He made two classifications of "railroad spine": first, those cases showing distinct lesions; and, second, those cases showing functional disturbance, but with no demonstrable lesion.

The time allotted to the speaker was almost consumed in a description of the cord and its surroundings, and he was compelled to give an extract of the last part of his paper. In conclusion, he claimed that concussive force must always produce a lesion to cause paralysis, and that there are no distinctive characteristics of railway spine.

DR. JUDD, of Galesburg, Ill., next described an interesting case of supposed railway spine. The patient, a cattle dealer, had received a slight injury to his thumb while on his road to Chicago with a load of stock. The injured thumb was dressed and the man continued his journey, and after selling his stock returned home. He carried his arm in a sling and used it very little. A railroad attorney and a local doctor talked to him and convinced the man that he had the so-called railroad spine, and should enter suit against the company. As he was very ignorant, he accepted their suggestion and asked damages from the railroad. Dr. Judd saw the patient six months after the injury; he still carried his arm in a sling and claimed to have no use whatever of it. The shoulder was somewhat shrunken. He would not consent to the administration of an anaesthetic, and only after considerable persuasion consented to the application of electricity. The arm was apparently paralyzed, but on his taking hold of the two handles of a battery there were marked contractions of the supposed paralyzed arm. The patient was very much surprised, and expressed great joy at finding that there was no paralysis of his arm, and at once commenced to use his arm again. The atrophy that was noted by the doctor was simply due to inactivity of the part. Dr. Judd believes that the patient was not a malingerer, but was the subject of suggestions from his doctor and lawyer. He terms this condition "litigation disease," and thinks it a species of neurosis the same as hysteria.

In discussion, Dr. Frank Lydston, of Chicago, cited cases to prove that the symptoms of concussion need not necessarily come on immediately after the receipt of an injury, but six months might intervene before symptoms appear. He not only took issue with Dr. Watson upon this point, but also claimed that there are cases of concussion in which there are no demonstrable lesions.

Dr. Clevenger, of Chicago, believes that there are always symptoms in cases of true railway spine that cannot be mistaken. He also said that one point that all the speakers had overlooked was the part played by the sympathetic system in these cases. According to this speaker, Dr. Watson's conclusions from his experiments are not to be relied upon, as the arrangement of the spinal cord of the dog and man are different because of their different positions, the former being horizontal during locomotion while the latter is perpendicular.

Dr. Kiernan, of Chicago, also held the same view.

Dr. Harvey Reed, of Mansfield, does not believe that concussion always produces a demonstrable lesion, but that there is simply a disturbance of the molecular rela-

tion of the cord. He believes that permanent lesions of the cord are not due to concussion and that the effects of concussion are but temporary.

Dr. Moyer, of Chicago, thinks that there is a source of fallacy in Dr. Watson's experiments, and considers his results almost without value.

Dr. King, of Tennessee, believes that there is no such condition as concussion without a demonstrable lesion. He has never seen the analogue of "railway spine" in private practice, but has seen at least a hundred cases of this condition while in the service of different railroads. He claims that, without exception, these cases are malingerers and only assume this condition for the purpose of pecuniary gain.

Dr. Hughes, of St. Louis, spoke in favor of Dr. Watson's paper, and thought that he had tangible ground upon which to work. He also believes that the condition known as railway spine is often the expression of a latent neurotic condition, which becomes manifest because of the shock of the injury.

Dr. Diller, of Pittsburg, believes that railway spine is often the result of suggestion of the patient's doctor or lawyer. A nervous woman receives a slight injury and her lawyer suggests this condition to her, as the result of which a psychical impression is made, followed by the symptoms of this affection.

The discussion upon the subject of railway spine was quite animated, and each speaker had a theory of his own in regard to this disease.

DR. SILAS B. PRESBURY, of Taunton, Mass., next read a paper on "The Medico-legal Investigation of Deaths by Violence in the State of Massachusetts." In that State each county is divided into districts, usually four, and a medical examiner is appointed to investigate all deaths by violence. This examiner is appointed by the Governor, and holds his office for seven years. Any responsible citizen may notify this examiner of a death supposed to be due to violence, and he must at once institute an examination unless he deems it unnecessary. After being notified, the examiner takes charge of the body and a careful examination is made for marks of violence. The surroundings are accurately recorded, and if he finds no cause for suspicion, the body is delivered to the friends. If he deem an autopsy necessary, he so reports to the district attorney, or if in the city, to the mayor, who gives him authority to conduct the post-mortem. Two assistants are appointed, who assist the examiner. He may also call in the service of a chemist, if necessary. The result of the inquest is carefully recorded, one copy being filed with the attorney of the district and another with the justice.

The medical examiner does not hold the inquest, and only acts in the capacity of a medical man, the legal matters being in other hands. The fee for an inspection of a body, without an autopsy, is five dollars; with an autopsy, it is thirty dollars. A mileage fee is also allowed.

The advantages of this system over the investigation of deaths by a coroner is the lessening of expenses, promptness and accuracy of the examination, the careful recording of the investigation, and the fact that the examiner only deals with the medical aspect of the case.

DR. DILLER, of Pittsburg, next reported a case of "Idiopathic Spinal Haemorrhage."

SECTION OF SURGERY AND ANATOMY.

The Section was called to order by the chairman, THEODORE A. McGRAW, M.D.

The first paper read was by J. MCF. GASTON, M.D., of Atlanta, Georgia, the subject being "Traumatism of the Chest." The author considered all trauma of the chest, including penetrating and gunshot wounds.

He called attention to the well-known fact that serious injury to the chest contents might result without any external evidence of violence.

Dr. Gaston was especially emphatic in that portion of his paper devoted to the treatment of penetrating wounds. He said that while all writers advised closing the external wound, if it was small, the opinions were divided as to the proper treatment of large penetrating wounds. The author advises hermetical closure of the external wound in every case. He believes that in those cases in which there is a large amount of effusion or haemorrhage, it will be gradually absorbed, while if the wound is not closed, pyothorax is much more apt to occur. Should the wound be closed, and pus form, the surgeon may open the chest at a favorable location.

In the *Medical and Surgical History of the War*, 1 per cent. of the recorded non-penetrating wounds proved fatal and over 65 per cent. of the penetrating.

In the discussion, Dr. Mynter, of Buffalo, quoted from an article in a recent foreign journal, in which the author advised, in cases of pneumothorax from injury, the conversion of the pneumothorax into a hydrothorax. For this purpose two canulae are inserted into the chest, one at a higher plane than the other. Through the lower of these, sterilized boric acid solution is injected until the chest cavity is filled, the air escaping through the upper canula. The canulae are then withdrawn and the wounds closed. The liquid may then be drawn from the chest by aspiration when thought best.

The next paper was on "The Surgical Uses of Aristol," by W. C. WILE, of Danbury, Connecticut. He considered the drug entirely from a clinical standpoint. Before the attention of the profession was called to this drug he had used iodoform very extensively and with great satisfaction.

In every extensive trial of aristol he has found it to answer every purpose for which he had formerly thought iodoform indicated. He uses it freely in all forms of recent wounds, dusted on the part. In burns an ointment is prescribed. Several cases were mentioned from his practice with very pleasing results. He considered aristol superior to iodoform, because of its absence from odor and freedom from toxic properties, and is equal to the latter in therapeutic value.

In the discussion following, Dr. Newman, of New York, stated that he has examined the urine many times of patients upon whom aristol was being employed, and always without finding any evidence of its elimination by the kidneys, proving to him the harmless nature of the drug. In some of these same cases, iodine applied to the wounds was promptly detected in the urine.

Dr. M. PRICE, of Philadelphia, then read a paper on "Peritonitis from a Surgical Standpoint." He began by stating that all cases of peritonitis were the result of a surgical cause. Idiopathic peritonitis he characterized as a delusion and a myth. The prominent symptoms of the disease, he said, were vomiting and tympanitic pain,

which, while generally present and pronounced, might be but slight. The temperature usually runs high at first. The pulse may be weak from the first, and becomes thready. The expression is peculiar and characteristic; the face is anxious, pinched, and the person seems to have aged several years. Constipation is a constant symptom. Tympanites may or may not be present, and, when marked, it adds to the gravity of the cases. Dr. Price considers the opium treatment the worst that could be adopted, while poultices, turpentine, etc., add to the liability of pus-formation. In an acute case, he gives saline purges, and if in three days the patient is not relieved, or if the temperature does not fall below the pus standard, he opens the abdominal cavity and drains.

By far the most prolific cause of peritonitis is disease of the uterine appendages; next in frequency comes appendicitis, and along with this, meddlesome gynecology. In five hundred cases in which Dr. Price operated or assisted, not one was idiopathic. Many of the chronic cases die of tuberculosis, which is another plea for early operation.

Dr. W. E. B. Davis, in the discussion, spoke particularly of peritonitis after perforation of the intestine or rupture of an abscess, advising immediate operation. If operation is postponed more than twenty-four hours, the case will almost surely result fatally.

The next paper was by DR. B. A. WATSON, of Jersey City, N. J., on the "Relation of Concussion of the Brain and Spinal Cord to Inflammatory and Other Morbid Changes in These Organs." The author said that, inasmuch as concussion of the brain had been pretty thoroughly investigated, he would confine himself particularly to the spinal cord. He considers the spinal cord the best-protected organ of the body, and that concussion of this organ is much less frequent than is usually supposed. By experiment it has been found that it takes a severe trauma to affect the cord, and this in certain limited areas of the body. He does not credit rupture of the membranes or gross hemorrhage, without fracture or luxation of the vertebrae. Partial luxation, he believes, may occur, injuring the cord, and reduction follow from the resiliency of the parts.

In concussion the force is so dissipated that the effect is diffused. In cases such as gunshot wounds, however, the force is concentrated, and a gross lesion of the cord might result. Concussion itself, he thinks, does not give rise to inflammatory action.

The last paper was that of DR. MYNTER, entitled: "Is Early Excision or Conservative Treatment in Coxitis Indicated?" The pathology was very carefully discussed, and the tubercular origin insisted upon. He considered that most cases began as an ostitis, later involving the joint. He cited several cases from his own practice, and concluded that the most useful limb and the most satisfactory results followed early excision. He showed specimens of two cases in which this plan had been followed with happy results.

Drs. Townsend, Sayre, and Ridley, of New York, were unanimous in advising conservative treatment.

THIRD DAY—GENERAL SESSION.

The general session convened in the Opera House at 10.15 A.M., the President in the chair.

DR. JOSEPH M. MATTHEWS, of Louisville, Ky., delivered the address on General Surgery. Since a review of the whole field would require too much time, Dr. Matthews limited himself to a special subject, the discussion of which does not appear in the Sectional meetings, namely, "Stricture of the Rectum: Its Etiology, Pathology, Symptomatology, Diagnosis, and Treatment." The position taken by him in the paper he confessed was for the most part contrary to the opinions of the day. Following Kelsey's classification of the causation of stricture into the congenital and acquired forms, he considered the subdivisions in turn. He denied the existence of spasm of the rectum as a variety of stricture, and even doubted its existence at all. Although dysentery is stated by many authors to be a common cause of stricture, he has never seen a case of such an origin. If such a condition existed it would be very common among the veterans of the late war, but the Pension Department has no such cases on record. He doubts the tubercular origin of stricture. He regards the prime cause of stricture to be inflammatory action, either of syphilitic, cancerous, or traumatic origin.

Secondary syphilis is the usual and only form of venereal disease giving rise to stricture of the rectum. He has never seen a case resulting from a soft sore. Considering the subject of colotomy, as advised by Bryant, of England, he concludes that it is but rarely indicated, and bases his belief upon the pathology of the disease. Incipient cancer is not an indication for the operation, nor is pain relieved by it, since the latter results from the action of the morbid process upon the nerves of the diseased portion. The passage of faeces over the cancerous portion is not productive of pain, or if it is, to but a slight degree. Dilatation will relieve the trouble. Syphilis he regards as the cause of more than one-half of the cases of stricture; but he believes that colotomy is not indicated by the existence of this disease.

As regards the statistics of the operation of colotomy, it has been shown that thirty-eight out of every hundred cases of lumbar colotomy, and forty-five in every hundred of iliac colotomy, perish within twenty-four hours. The early symptoms of stricture are marked or entirely *nil*. The inflammatory process is very slow in the rectum.

So-called constipation is often the first symptom, and this is followed, as the disease progresses to ulceration, by a discharge of bloody or muco-pus, with alternating diarrhoea, flatulency, and constipation. Irritation of the kidneys and bladder is frequently present. Pain is not a prominent symptom and is often entirely absent. Acute obstruction, as a primary symptom, he has never seen. The diagnosis is easily made by the finger when the stricture is within four inches of the anus, as happens in the majority of the cases. Malignant and syphilitic stricture are similar in regard to their mode of invasion, both beginning as a deposit, which is followed in time by ulceration. Benign cases, including the traumatic forms, begin with abscesses in ulcerations which are followed by plastic deposits.

Dr. Matthews objects to the employment of rectal bougies of any form for the purpose of diagnosis, as they are apt to do more harm than good. The usual seat of the stricture is low in the rectum, and if above this, what is the advantage secured by employing a

dangerous instrument which can do no possible good? In considering the treatment he strongly opposed gradual dilatation as being apt to cause the throwing out of more plasma and the increase in size of the stricture. Forceful divulsion is much preferable. He prefers the method of incision, especially multiple internal incision, followed by the introduction of a drainage-tube, around which antiseptic dressings are to be packed. The objection to the external form of incision is that in division of the sphincter sometimes incontinence of faeces results. Electrolysis is too slow a process to be of any value, excision, or better, extirpation, is much to be preferred to colotomy, since the disease is removed by the former and only palliated by the latter. The entire length of the rectum may be removed without interfering with the action of the sphincter. Colotomy, he claims, is rarely justified, if at all. Whenever the stricture, other than the malignant form, is located in the movable gut, then exo-femoral colotomy should be performed, provided that the bowel below the seat of operation be closed to prevent the passage of faeces beyond the opening in the bowels.

The report of the Board of Trustees for the year ending March 31, 1891, was submitted. The circulation of the *Journal* is 5450 copies. The cost of publication and editing, \$23,373.97.

The receipts for the year have been \$14,465.59. From the general funds \$8909.38 were drawn, leaving a balance of \$762.40. The amount in the hands of the Trustees is \$4503.39.

An editor has not yet been selected, the matter being in the hands of the Trustees. It was recommended that a suitable building be erected for the publication office. The report was signed by P. O. Hooper, President; John B. Hamilton, Secretary.

The Committee on Nominations made the following report of officers selected for the ensuing year:

President.—H. V. Marcy, M.D., of Boston, Mass.

Vice-Presidents.—Willis P. King, M.D., of Missouri; Henry Palmer, M.D., of Wisconsin; W. E. B. Davis, M.D., of Alabama; W. E. Taylor, M.D., of California.

Treasurer.—Richard J. Dunglison, M.D., of Pennsylvania.

Secretary.—William B. Atkinson, M.D., of Pennsylvania.

Librarian.—George W. Webster, M.D., of Illinois.

Trustees of Journal.—W. W. Dawson, M.D., of Ohio; W. W. Potter, M.D., of New York; J. H. Rauch, M.D., of Illinois.

Judicial Council to fill Vacancies.—H. O. Walker, M.D., of Michigan; W. L. Hubbard, M.D., of Indiana; Hunter McGuire, M.D., of Virginia; G. L. Porter, M.D., of Connecticut; C. H. Hughes, M.D., of Missouri; A. M. Owen, M.D., of Indiana; D. R. Didamos, M.D., of New York.

Place of meeting in 1892, Hot Springs, Arkansas.

Time of meeting, first Tuesday in May.

Special committees were named for State Medicine, International Medical Congress, and Necrology.

It was moved by Dr. Walker, of Michigan, to strike out "Hot Springs" and insert "Detroit." Carried.

The report of the Nominating Committee was then passed as amended.

Dr. Scott, of Ohio, nominated Dr. H. O. Walker as

Chairman of the Committee of Arrangements for the meeting in Detroit.

Dr. N. S. Davis moved as an amendment to the report that the time of meeting be changed to the first Monday in June. Carried.

The report of the Committee on the new Medical Cabinet Officer was received, recommending the petitioning of the next Congress to appoint such an officer, to be known as the Secretary of Public Health. Adopted as read.

NEWS ITEMS.

University of Pennsylvania.—The Medical Department of the University of Pennsylvania held its 117th annual commencement on Friday, May 1st, at 12 o'clock. The degree of M.D. was conferred on 133 candidates. THE MEDICAL NEWS prize of \$100 was awarded to Dr. Joseph B. Sailer for an experimental essay. The Alumni prize for the highest average during the three years' course was awarded to Edward C. Ellett, of Memphis, Tenn.

Dr. James Tyson pronounced the valedictory address, in the course of which he alluded with much feeling to the death of Dr. Joseph Leidy, which occurred the day before commencement.

PROF. ROSWELL PARK will deliver the remaining four lectures of the Mütter Course on Surgical Pathology in the hall of the College of Physicians of Philadelphia, on May 12th, 13th, 14th, and 15th, at 8.15 P.M. Subject: "Surgical Bacteriology." Lecture VII. Actinomycosis; malignant edema; rauschbrand; anthrax; glanders. Lecture VIII. Tuberculosis; introduction to a study of mixed and secondary infections. Lectures IX. and X. Mixed and secondary infections—sequelæ of pneumonia, typhoid, exanthemata, cholera, dysentery, erysipelas, gonorrhœa, syphilis, tuberculosis, etc. The medical profession are cordially invited to attend.

A Singular Accident.—On April 18th Rev. Dr. Bothwell, of Brooklyn, while withdrawing the cork from a medicine bottle was suddenly seized with a fit of laughing during which, in an effort at inspiration, the cork was drawn into the trachea. The presence of the foreign body immediately caused a severe attack of coughing accompanied by marked and very painful dyspnoea. Several attempts were made to dislodge the cork without success, and on the day following the accident the patient was removed to the Brooklyn Hospital, where tracheotomy was performed with the intention of removing the cork through the wound. It was found, however, that it had been drawn down deeply into the bronchus, and all efforts to remove it were futile. A delicately-made probang-like instrument, concealing within it a small corkscrew, was inserted into the bronchus, and an attempt to dislodge the cork in this manner also proved of no avail. It was suggested that if the ribs over the site of the cork were removed the bronchus might be opened. The condition of the patient, however, would not admit of this operation, and he died on May 3d of exhaustion.

Foreign substances in the upper part of the trachea are not uncommon accidents, but there are not many

cases on record where so large a body as a cork has been drawn down so deeply into the bronchus as in this case.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 28 TO MAY 4, 1891.

By direction of the Secretary of War, JAMES C. MCKEE, Lieutenant-Colonel and Surgeon, having been found incapacitated for active service by an Army Retiring Board, is relieved from further duty as Attending Surgeon and Examiner of Recruits at Philadelphia, Pa., and will proceed to his home, and report by letter to the Adjutant-General of the Army.—Par. 3, S. O. 96, A. G. O., Washington, April 28, 1891.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING MAY 2, 1891.

LUNG, GEORGE A., Assistant Surgeon.—Granted two months' leave of absence.

HOEHLING, A. A., Medical Inspector.—Detached from Navy Yard, League Island, and waiting orders.

JONES, W. H., Surgeon.—Ordered to Navy Yard, League Island:

NORTON, O. D., Passed Assistant Surgeon.—Detached from Naval Hospital, Chelsea, Mass., and waiting orders.

CORDEIRO, F. J. B., Passed Assistant Surgeon.—Ordered to Naval Hospital, Chelsea, Mass.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING MAY 2, 1891.

BROWN, B. W., Assistant Surgeon.—Detailed as Medical Officer Revenue Steamer "Rush," during summer cruise, April 14, 1891.

AUSTIN, H. W., Surgeon.—Detailed as member of Board of Examiners Marine-Hospital Service, April 21, 1891. Detailed as Chairman of Board for Physical Examination of Officers and Candidates Revenue-Marine Service, April 29, 1891.

GODFREY, JOHN, Surgeon.—Detail as member of Board of Examiners revoked, April 21, 1891.

IRWIN, FAIRFAX, Surgeon.—Detailed as Recorder of Board for Physical Examination of Officers and Candidates Revenue-Marine Service, April 29, 1891.

CARRINGTON, P. F., Passed Assistant Surgeon.—To proceed to Fernandina and Jacksonville, Fla., as Inspector, May 1, 1891.

STIMPSON, W. G., Assistant Surgeon.—When relieved, to proceed to Savannah, Ga., for temporary duty, May 2, 1891.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will be liberally paid for upon publication, or 250 reprints will be furnished instead of payment, provided request for reprints be noted by author at top of manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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